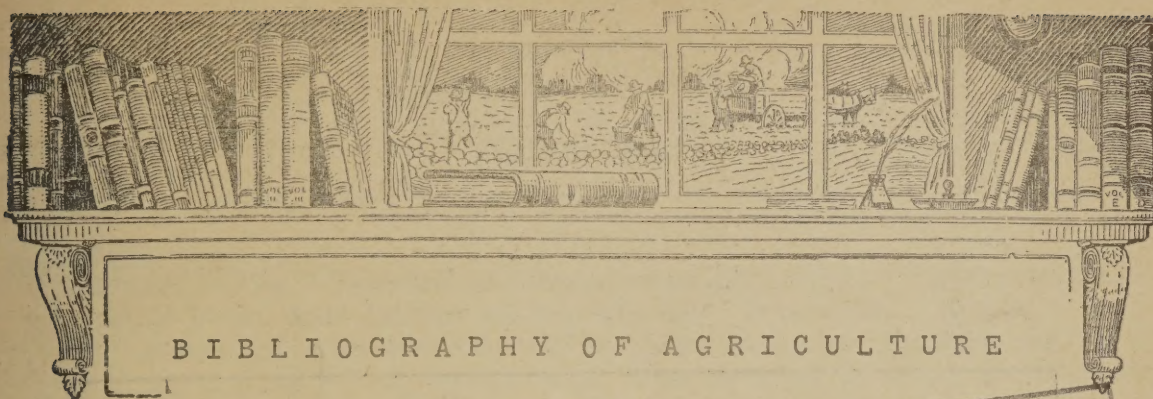
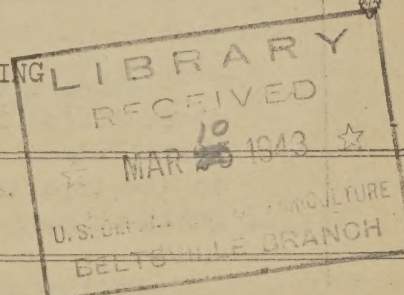


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BIBLIOGRAPHY OF AGRICULTURE

SECTION B
AGRICULTURAL ENGINEERING



Vol. 2

January 1943

No. 1

The Bibliography of Agriculture is issued monthly in six sections.

Section A, Agricultural Economics and Rural Sociology. Supersedes Agricultural Economics Literature.

Section B, Agricultural Engineering. Supersedes Current Literature in Agricultural Engineering.

Section C, Entomology. Supersedes Entomology Current Literature.

Section D, Plant Science. Supersedes Plant Science Literature.

Section E, Forestry. Continues Forestry Current Literature, which ceased publication with v. 7, no. 2, March-April 1940.

Section F, Food Processing and Distribution.

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BIBLIOGRAPHY OF AGRICULTURE

SECTION B
AGRICULTURAL ENGINEERING

Vol. 2

January 1943

No. 1

ACCIDENTS

SHERMAN, C. B. Wartime accidents endanger crops. Better Crops with Plant Food 26(9): 18-19, 40, 41. Nov. 1942. 6 B46

Farm accidents are all too frequent at best. Farmers are injured more often, relatively, than workers in other occupations, yet less is done about prevention and safety on farms.

SPRAGUE, D. C. You can prevent breakdowns and accidents. Pa. Coop. Potato Growers Assoc. Inc. Guide Post 19(12): 4-5. Dec. 1942. 75.8 G94

AGRICULTURAL ENGINEERING

LaSALLE EXTENSION UNIVERSITY. Farm engineering and management. 12 pts. Chicago, 1940. 281 L33

Especially prepared for National Farm Youth Foundation. Pt. 1, Business of farming; Pt. 2, Managing the farm plant and equipment; Pt. 3, Soil and crop management; Pt. 4, Profitable management of farm operations; Pt. 5, Handling labor on the farm; Pt. 6, Profitable use of modern farm machinery; Pt. 7, Farm power and tractor farming; Pt. 8, Managing the money problem; Pt. 9, Farm records as aids to profitable management; Pt. 10, Profitable marketing of farm products; Pt. 11, Legal and economic factors in farm management; Pt. 12, Salesmanship and personal success.

MONSON, O. W. Department of rural engineering. Mont. Agr. Expt. Sta. Ann. Rpts. (1941-42) 48 and 49: 33-35. Bozeman, 1942. 100 M76

Discusses possibilities of water wheels for small power plants, raising of crops under irrigation, irrigation practices, range improvement through the conservation of flood water, rural electrification, problem of equitably distributing the available water supply and tabulation of water right laws.

THORNYCROFT, JOHN E. Engineering in agriculture. Engineering 154(4008-4010): 375-376, 384-385, 405. Nov. 6, 13, 20, 1942. 290.8 En322

WELLS, FRANKLIN C. Chemistry - farming - building. Pencil Points 23(12): 54-59. Dec. 1942. 296.8 P37

BROODERS

YUNG, F. D. Lamp heated electric brooder. Nebr. Agr. Expt. Sta. Agr. Engin. Prog. Rpt. 9, 11 pp., processed. Lincoln, 1942. 100 N27A

YUNG, F. D. Studies of insulated electric brooders. Nebr. Agr. Expt. Sta. Agr. Engin. Prog. Rpt. 8, 11 pp., processed. Lincoln, 1941. 100 N27A

BUILDING CONSTRUCTION

- KAISER, W. G. How-to's for cold-weather concrete. Successful Farming 41(1): 17, 32, 71-72. Jan. 1943. 6 Sul2
- U. S. BUR. OF ENTOMOLOGY AND PLANT QUARANTINE. DIV. OF FOREST INSECT INVESTIGATIONS. Prevention damage to buildings by subterranean termites and their control. U. S. Dept. Agr. Farmers' Bul. 1911, 37 pp. Washington, D. C., 1942. 1 Ag84F
- Gives preventive construction for control.
- WEBER, CHARLES G., and REICHEL, ROBERT C. Accumulation of moisture in walls of frame construction during winter exposure. U. S. Natl. Bur. Standards. Bldg. Materials and Structures. Rpt. BMS93, 5 pp. Washington, D. C., 1942. 157.88 B862
- Investigation was made for the purpose of obtaining some basic information on the accumulation of moisture in the outside walls of frame construction, using fiber sheathing and wood sheathing in direct comparison.

CONSERVATION OF RESOURCES

- BENNETT, HUGH H. The South tomorrow. 18 pp., processed. [Washington, D. C.] U. S. Soil conservation service, 1942. 1.96 Ad62
- An address given before a meeting of Friends of the Land, Atlanta, Ga., June 11, 1942.
- DICKERSON, W. H., JR., and ROGERS, H. T. Surface run-off and erosion from permanent pastures in southwest Virginia as influenced by applications of triple superphosphate. Va. Agr. Expt. Sta. Tech. Bul. 77, 26 pp. Blacksburg, 1941. 100 V81S
- DULEY, F. L., and RUSSEL, J. C. Crop residues for protecting row-crow land against runoff and erosion. Soil Sci. Soc. Amer. Proc. (1941) 6: 484-487. Morgantown, W. Va. [1942] 56.9 So3
- ENLOW, C. R. Production through conservation. U. S. Soil Conserv. Serv. Soil Conserv. 8(7): 148-150, 156. Jan. 1943. 1.6 So3S
- GAMMON, FRANCIS L. Continuous furrows in night ploughing. Farmer and Stock-Breeder and Agr. Gaz. 56(2768): 1681, diagram. Oct. 27, 1942. 10 F228
- HANSLOW, H. Soil drift control: Results of 1941-42 competition. Victoria Dept. Agr. Jour. 40(10): 513-520, 532. Oct. 1942. 23 V66J
- HOLLEY, J. HUNT. Humus soil erosion's arch-enemy. Farmers Weekly [Bloemfontein] 64: 180-181. Oct. 14, 1942. 24 F225
- Utilization of decomposed sawdust, wood, weeds and other vegetable matter makes lands flood-resistant and rich in crops. Pastures never ploughed by veld singed.
- KUNKEL, D. R., ENGBERG, C. A., and WHITEFORD, C. L. Physical land conditions on the Leatherwood creek demonstration project, Lawrence county, Indiana. U. S. Soil Conserv. Serv. Physical Land Survey, no. 24, 40 pp. Washington, D. C., 1941. 1.6 So31
- LOWDERMILK, W. C. New China prepares for increased production through soil conservation. U. S. Soil Conserv. Serv. Soil Conserv. 8(7): 150-154. Jan. 1943. 1.6 So3S

- McLAUGHLIN, WILLARD T., and BROWN, ROBERT L. Controlling coastal sand dunes in the Pacific northwest. U. S. Dept. Agr. Cir. 660, 46 pp. Washington, D. C., 1942. 1 Ag84C
- MARSHALL, V. C. Profits through soil conservation. East Tex. 17(3): 6. Dec. 1942. 6 Ea73
- "Proper use of land is only approach to increased production of either quantity or quality."
- MECH, S. J., and FREE, G. R. Movement of soil during tillage operations. Agr. Engin. 23(12): 379-382. Dec. 1942. 58.8 Ag83
- Development of benches during contour cultivation of such permanent crops as orchards and vineyards, and the observed movement of soil during cultivation prompted this study of the mechanical movement of soil. The object was to obtain measurements of soil movement caused by certain farm implements on different slopes and for different directions of travel. Emphasis was placed on movement up or down the slope.
- MILLER, PAUL R. Strip cropping on the contour in Vermont. Vt. Agr. Col. Ext. Brieflet 642, 5 pp., processed. Burlington, 1942. 275.29 V59E
- MORTLOCK, H. C., and GREENAWALT, R. D. Erosion and related land use conditions on the Box Elder creek project, Nebraska. U. S. Soil Conserv. Serv. Erosion Survey no. 22, 34 pp. Washington, D. C., 1941. 1.6 So31
- MYERS, H. E., and THROCKMORTON, R. I. Some experiences with asphalt in the establishment of grasses and legumes for erosion control. Soil Sci. Soc. Amer. Proc. (1941) 6: 459-461. Morgantown, W. Va. r1942 56.9 So3
- PEELE, T. C., and BEALE, O. W. Effect of runoff and erosion of improved aggregation resulting from the stimulation of microbial activity. Soil Sci. Soc. Amer. Proc. (1941) 6: 176-182. Morgantown, W. Va. r1942 56.9 So3
- POWELL, DAVID P., and GAY, CHARLES B. Physical land conditions in Greene county, Georgia. U. S. Soil Conserv. Serv. Physical Land Survey no. 23, 53 pp. Washington, D. C., 1941. 1.6 So31
- ROBERTS, EDD. Building a terrace with a one-way plow. U. S. Soil Conserv. Serv. Soil Conserv. 8(7): 159. Jan. 1943. 1.6 So3S
- ROBERTS, ROY W., BRANNER, GEORGE C., and OWENS, MORGAN R., eds. Arkansas' natural resources: Their conservation and use. 452 pp. Fayetteville, Ark., Source book committee, 1942. 280:009 R54
- Treatise on natural resources of the State prepared cooperatively by specialists.
- SEARS, PAUL B. Topsoil and Bibles. Common Ground 3(2): 50-56. Winter 1943. 280.8 C734
- Sketches of early agriculture in the United States as influenced or developed by various immigrant or native groups, emphasizing the the necessity for and rewards of soil conservation and proper land use.
- U. S. SOIL CONSERVATION SERVICE. REGION 4. Conservation farming--a wartime necessity; produce vital crops the conservation way. 35 pp., processed. Fort Worth, Tex. r1942 1.9604 C76
- A series of reports and sketches on conservation farming and its advantages in Arkansas, Louisiana, Oklahoma, and Texas.

COTTON GINS AND GINNING

U. S. BUR. OF AGRICULTURAL CHEMISTRY AND ENGINEERING. Developments in roller covering for roller cotton gins. 9 pp., processed. Stoneville, Miss., 1941. 1.932 A2Ag8

COTTON MACHINERY

IHC develops mechanical cotton picker. Cotton and Cotton Oil Press 43(26): 11, 14. Dec. 19, 1942. 304.8 C822
Article with same title in Impl. and Tractor 57(26): 16, 38, 40. Dec. 19, 1942. 58.8 W41

[INTERNATIONAL HARVESTER COMPANY] Mechanical cotton picker available as labor saver. Mfrs. Rec. 111(12): 30-31. Dec. 1942. 297.8 M31

Tests showed quality of picking satisfactory to the plantation owners, but they were also convinced by conservative crop accounting that machine-picked cotton, processed in modern gins, represents a considerable saving over cotton picked by the hand-picking method. McCORMICK, FOWLER. International harvester cotton picker is now perfected. Farm Impl. News 63(25): 36-38. Dec. 10, 1942. 58.8 F22

CROPS - DRYING

"GOODALL" grain drier has thermostatic heat control. Farm Impl. and Mach. Rev. 68(811): 570-571. Nov. 1, 1942. 58.8 Im72
HOME dehydration offers new possibilities for food preservation. Sci. Amer. 168(1): 29-30. Jan. 1943. 470 Sci25

Discusses various types of dehydrators.
HOME-MADE dehydrator will help solve some of your food problems. Ill. Rural Electrification Bul. 7(9): 1. Sept. 1942.

LATEST "Turner-Oxford" drier is a self-contained type. Farm Impl. and Mach. Rev. 68(811): 568. Nov. 1, 1942. 58.8 Im72
STANDLEY, B. H. How to build and use fruit and vegetable driers. Rural Electrification Exch. 5(4): 85-86. 4th quart., 1942. 173.2 R88Ru

VAN ARSDEL, W. B. Tunnel dehydrators and their use in vegetable dehydration. Part III. Food Indus. 14(12): 47-50, 108-109. Dec. 1942. 389.8 F737

Operating characteristics of tunnel dehydrators are discussed, including practical series on use of this type of equipment for dehydrating vegetables.

See also Section F, Food Processing and Distribution.

DRAINAGE

Three new draining outfits. Farm Impl. and Mach. Rev. 68(811): 560-562. Nov. 1, 1942. 58.8 Im72

ELECTRICITY ON THE FARM

BUGBEE, RALPH J. Electricity from the wind. Elect. on the Farm 15(12): 16. Dec. 1942. 335.8 E127

Discusses experimental wind turbine designed to generate 1,000 kilowatts in a 30-mile wind. Operated by Central Vermont Public Service Corporation.

- GRAY, L. W. Service and education are rural division objects.
Rural Electrification. Exch. 5(4): 81-82. 4th quart., 1942. 173.2 R88Ru
- HEMKER, A. H. No idle moments for electric equipment. Rural Electrification. Exch. 5(4): 95. 4th quart., 1942. 173.2 R88Ru
- JOHNSON, ROBERT E. Power company's rural department and the farm customer. Rural Electrification. Exch. 5(4): 87, 92. 4th quart., 1942. 173.2 R88Ru
- KOONTZ, L. L. Utility cooperation with state agricultural extension service and other educational agencies. Rural Electrification. Exch. 5(4): 73-76, 88. 4th quart., 1942. 173.2 R88Ru
- LAYER lighting and blackouts. Elect. on the Farm 15(12): 13, 25. Dec. 1942. 335.8 E127
- LEATHAM, C. H. Farm and home equipment maintenance and repair schools. Rural Electrification. Exch. 5(4): 93. 4th quart., 1942. 173.2 R88Ru
- Discussion of plan of Monongahela West Penn Public Service Company in cooperation with the College of Agriculture Extension Division and the Department of Vocational Agriculture.
- LEHMANN, E. W. Improving farm labor efficiency. Elect. on the Farm 15(12): 5-6. Dec. 1942. 335.8 E127
- PENNSYLVANIA. AGRICULTURAL EXPERIMENT STATION. Electric appliances may save much farm labor. Pa. Agr. Expt. Sta. Ann. Rpt. (1941/42) 55: 5-6. State College, 1942. 100 P381
- RALL, UDO. Cooperativas de electrificación rural en los Estados Unidos de América. Unión Panamer. Ofic. de Coop. Agr. Ser. sobre Coop., no. 18, 34 pp., processed. Washington, D. C., 1942. 150.9 C78S
- Rural electrification cooperatives in the United States.
- SAMUELS, M. M. Electricity puts its hand to the plow. Pencil Points 23(12): 60-62. Dec. 1942. 296.8 P37
- SCHUH, E. C. Irradiation in egg production. Elect. on the Farm 15(12): 12-13. Dec. 1942. 335.8 E127
- STAHL, E. G. Utilization engineering for large agricultural customers. Rural Electrification. Exch. 5(4): 77-80. 4th quart., 1942. 173.2 R88Ru
- WEBB, J. S. War-time rural program includes demonstration farms. Rural Electrification. Exch. 5(4): 83-84. 4th quart., 1942. 173.2 R88Ru
- WOODIN, M. D., and BADENHOP, MERTON. Rural electrification in Louisiana. La. Rural Econ. 4(4): 4, 8-9. Sept. 1942.
- Map shows location of R.E.A. projects. Tables show number of consumers, miles of distribution line, consumption of electricity and revenues per mile of line.

ENGINES

- BENDER, RENÉ J. Diesels don't have to smoke. Farm Impl. News 63(25): 26, 31-32. Dec. 10, 1942. 58.8 F22
- Gives causes of visible smoke in exhaust of diesel engines.

EVAPORATION

- WOODRUFF, C. M. Movement and evaporation of soil water in relation to pF. Soil Sci. Soc. Amer. Proc. (1941) 6: 120-125. Morgantown, W. Va. [1942] 56.9 So3

FARM MACHINERY AND EQUIPMENT

AN ALL-STEEL welded hay sweep has interchangeable tines. Farm Impl. and Mach. Rev. 68(811): 563-564. Nov. 1, 1942. 58.8 Im72

[AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS] Rentals - A method of sharing equipment. Impl. and Tractor 57(26): 14. Dec. 19, 1942. 58.8 W41

Gives schedule of rental rates. Charges double for first five hours of use.

BEET harvesters in the East. Sugar 37(12): 21-22. Dec. 1942. 65.8 F11

Scott Viner complete harvester in use for past four years in Ohio. Oliver develops machine for American Crystal Sugar Company. BENSON, A. O., and BELL, C. C. Guide to use of wood as an alternate material in agricultural implements. 14 pp., processed. Madison, Wis. U. S. Forest service, Forest products laboratory, June 1942. 1.9 F761R

In cooperation with the University of Wisconsin.

ELASINGAME, R. U. Winter care of your power plant. Pa. Coop. Potato Growers Assoc. Inc. Guide Post 19(12): 3, 17. Dec. 1942. 75.8 G94

Discusses winter care and repair of farm machinery.

BURDETT, JOSEPH P. Floating mower removes grass from irrigation ditches. Engin. News-Rec. 129(23): 796. Dec. 3, 1942. 290.8 En34

Developed by the Clear Lake irrigation district at Woodland, Calif.

CHRISTIE, ART. Walnut harvesters. Pacific Rural Press and Calif. Farmer 144(12): 321. Dec. 12, 1942. 6 F112A

CÓMO ERA la industria de aperos en los Estados Unidos hace 60 años. Hacienda 37(12): 490-492. Dec. 1942. 6 H11

Farm implement industry in the United States during the past 60 years.

CRANE, C. E. Dixie beet thinner. Spreckels Sugar Beet Bul. 6(12): 69, 74. Dec. 1942. 66.8 Sp7

Shows most promise of all cross-cultivating and row mechanical blocking machines so far tested.

DAVIDSON, J. BROWNLEE. Plow preparedness. Successful Farming 41(1): 34. Jan. 1943. 6 Su12

DELTA farmer's home-made beet harvester is simple, effective. Impl. Rec. 39(12): 26. Dec. 1942. 58.8 Im73

From practical permanent standpoint, field losses were found to be prohibitive and topping not too good, but during period of labor shortage, machine is of considerable promise.

DREESSEN, W. H. Survey of farm trucks in Oregon. Oreg. Agr. Expt. Sta. Cir. Inform. 281, 31 pp., processed. Corvallis, 1942. 100 Or30

AN ELEVATOR-TYPE potato picker with delivery direct to a trailer.

Farm Impl. and Mach. Rev. 68(811): 566-567. Nov. 1, 1942. 58.8 Im72

FORWARD drive attachment for a centre-cut mower. Farm Impl. and Mach. Rev. 68(811): 569. Nov. 1, 1942. 58.8 Im72

FRANCIS, GERALD M. Distribution of machinery by farmers' cooperative associations. U. S. Farm Credit Admin. Cir. C-125, 57 pp. Washington, D. C., 1941. 166.2 C4923

This survey and analysis of cooperative distribution of farm machinery was undertaken to assemble more specific information than

has previously been available about the machinery operations of farmers' associations, the various methods they have employed in these operations, the main problems they have encountered, and the general results obtained. The study aims also to point out examples of successful distribution of machinery and to call attention to practices that appear to lead to its success.

HIGGINS, F. HAL. Machines: They can solve labor problems of sugar beet farmers. Sugar 37(12): 16-20. Dec. 1942. 65.8 F11

Topping, lifting and loading machines have been developed to enable farms to maintain production - if materials can be obtained.

HUMPHRIES, W. R. Care and repair of mowers and binders. U. S. Dept. Agr. Farmers' Bul. 1754, 20 pp. Washington, D. C., 1942. 1 Ag84F

KEEPING farm machines in service: This well-equipped repair shop keeps many pieces of farm equipment at work that would otherwise be discarded. Farmers' Mag. 39(12): 16, 49. Dec. 1942. 7 C165

KELLEY, J. B. How to harvest hemp seed: Practical methods used by experienced growers. Ky. Agr. Col. Ext. A-23, 7 pp. Lexington, 1942. 275.29 K415Ab

KITCHING, H. W. Put farm machines in fighting trim. Farmers' Mag. 39(12): 17. Dec. 1942. 7 C165

Points suggested as a guide for checkup: 1. Check main frame for loose or missing bolts and bent or broken braces. 2. Clean machine thoroughly. 3. Lubricate thoroughly. 4. Protect all polished metal parts such as plow moldboards, binder knotter parts and knives, with a coating of oil or grease. 5. Remove all belts and canvasses and store them in a cool, dry, dark place. 6. Store machines carefully.

KRANICK, FRANK. Plowing at top efficiency. Pt. 2. Impl. and Tractor 57(25): 12-13, 37. Dec. 5, 1942. 58.8 W41

LONG, MARY E. Wartime distribution of agricultural machinery in the United Kingdom. U. S. Foreign Agr. Relat. Foreign Agr. 6(9): 326-328. Sept. 1942. 1.9 Ec7For

MCCORD, HALLACK. Protect your machinery this winter. West. Farm Life 44(24): 4. Dec. 15, 1942. 6 R153

MARTIN, G. E., and GOWDER, M. T. Plow adjustments. Tenn. Agr. Col. Ext. Pub. 266, 8 pp. Knoxville, 1942. 275.29 T25

MISSOURI. AGRICULTURAL EXTENSION SERVICE. Plow service. Impl. and Tractor 57(25): 22, 24, 26. Dec. 5, 1942. 58.8 W41

Some important adjustments and equipment to check.

NEW IDEA, INC. Operation and maintenance of New Idea corn pickers. Farm Impl. News 63(25): 20, 22, 24-25. Dec. 10, 1942. 58.8 F22

Extracts from bulletin, "Care and operation of New Idea farm machines" issued as a contribution to the war program.

"ON THE LEVEL": More about the adjustment and use of levels in farm projects. Part 2. Better Farm Mach. and Equip. 15(2): 18, 20. Nov.-Dec. 1942. 58.8 B46

PENNSYLVANIA. AGRICULTURAL EXPERIMENT STATION. Pressure on landside increases plow draft. Pa. Agr. Expt. Sta. Ann. Rpt. (1941/42) 55: 4. State College, 1942. 100 P381

Results of investigations show that plow draft can be measurably reduced by transferring as much possible of side force of implement from landside to rear furrow wheel. Tests were conducted with conventional farm plows.

PENNSYLVANIA. AGRICULTURAL EXPERIMENT STATION. Stop-hitches protect plows from breakage. Pa. Agr. Expt. Sta. Ann. Rpt. (1941/42) 55: 4-5. State College, 1942. 100 P381

Two types of stop-hitches constructed have performed up to expectations. Their chief use is in protecting plows and similar tillage implements from breakage when operated in stony or stumpy ground. One is semi-automatic in operation in that it consists of coupling for carrying normal pull which releases when an immovable object is struck, a clutch throwout, a spring for stopping tractor and pulling it back for recoupling, and hydraulic cylinder to assist spring and to control its action in recoupling process. Second type consists only of release and hydraulic cylinder which creates enough resistance to stop tractor by spinning wheels.

PHAGAN, C. V. Milling wheat at home. Elect. on the Farm 15(12): 10-11. Dec. 1942. 335.8 E127

Offers unusual opportunities in obtaining maximum amount of nutritional values at minimum expense.

ROEHL, L. M. Fitting a buzz saw. Amer. Agr. 139(26): 3, 8. Dec. 19, 1942. 6 Am3

ROSTER of farm machinery rationing committee members. Impl. Rec. 39(12): 16-17, 36. Dec. 1942. 58.8 Im73

SMITH, L. J. Can we win the war with less farm machinery and labor? Better Farm Mach. and Equip. 15(2): 6-7. Nov.-Dec. 1942. 58.8 B46

WALKER, H. B. Farm production in wartime: How to produce more with less manpower and equipment is number one problem for American farmers. Elect. West 89(6): 61-63. Dec. 1942. 335.8 J82

WALKER, H. B. Idealism alone will not produce food-for-freedom. Farm Impl. News 63(26): 24-26. Dec. 24, 1942. 58.8 F22

Use must be made of technical knowledge to the fullest in keeping farm machines rolling in the fields to produce food necessary for the war effort and to create stock piles.

YOUNG, A. L. Baling straw left by combine. Agr. Engin. 23(12): 377-378, 389. Dec. 1942. 58.8 Ag83

Tests referred to in this paper were made primarily to secure and compare cost data of different methods of baling straw left in a windrow by a combine, using a pickup baler.

FARM STRUCTURES

CROW, RAY. Program for postwar farm building. Agr. Engin. 23(12): 373-376. Dec. 1942. 58.8 Ag83

HAMLIN, TALBOT F. Farm buildings are architecture. Pencil Points 23(12): 42-46. Dec. 1942. 296.8 P37

MAHONY, L. A., and CROWLEY, E. Dairying without mud: The efficacy of the concrete track. Victoria Dept. Agr. Jour. 40(10): 536-538. Oct. 1942. 23 V66J

MAIM, EDWARD A. Estimating charts for farm buildings. 72 pp. Minneapolis, Minn., The author, 1926-1939. 296 M292

WANK, ROLAND A. Architecture in rural areas: A report on TVA experience. Pencil Points 23(12): 47-53. Dec. 1942. 296.8 P37

FENCES

ADD YEARS to fence posts by simple inexpensive method. West. Farm Life 44(24): 13. Dec. 15, 1942. 6 R153

Method for chemically treating fence posts developed at United States Forest Products Laboratory, Madison, Wis. It is estimated that posts which ordinarily last only 2 or 3 years will last 10 to 15 years or longer when preserved with this chemical.

FERTILIZER PLACEMENT

GRAY, S. D. Some experiences in applying fertilizer. Better Crops with Plant Food 26(9): 14-17, 38, 39. Nov. 1942. 6 B46

NORTH CAROLINA. AGRICULTURAL EXPERIMENT STATION. Once-over cotton planter and fertilizer distributor for the cotton farmer. N. C. Agr. Expt. Sta. Ann. Rpt. (1940/1941) 64: 21-22. Raleigh, 1942. 100 N81

Combination fertilizer distributor and planter has been designed and built by the Experiment station. This machine places the fertilizer in two separate bands, knocks off the ridge and plants the seed at a variable depth slightly above the level of the fertilizer. Tests on this machine along with other commercial distributors and planters show that the power required per acre for the once-over machine is as low or lower than other methods involving a commercial machine. The time required to plant and fertilize an acre of cotton with the once-over machine is about one-half or less of that required of any other method tested.

PARKER, M. M. Effect of fertilizer placement on snap beans, lima beans, and peas. Va. Truck Expt. Sta. Bul. 107, pp. 1759-1781. Norfolk, 1942. 100 V813B

SAYRE, CHARLES B. Un método más fácil y efectiva para aplicar los fertilizantes. Hacienda 37(12): 498-500. Dec. 1942. 6 H11

The simplest and most effective method for the application of fertilizers. Description of machines used.

FIRE PROTECTION

LESS fires - more firing. Ga. Agr. Col. Ext. Cir. 301, folder. Athens, 1942. 275.29 G29C

MANY barns in Illinois are destroyed by fire resulting from carelessness. Ill. Rural Electrification Bul. 7(11): 3. Nov. 1942.

NORTH DAKOTA. AGRICULTURAL COLLEGE. EXTENSION SERVICE. Prevent fire: Save the grass, protect the soil. N. Dak. Agr. Col. Ext. Serv. Spec. Cir. A-29, folder. Fargo, 1942. 275.29 N812S

SHIVERY, G. B. Prevent farm fires. Tenn. Agr. Col. Ext. Pub. 269, 8 pp. Knoxville, 1942. 275.29 T25

VIRGINIA. AGRICULTURAL EXTENSION SERVICE. Farm fires destroy property, consume food and feed, provide a smoke screen for the enemy, divert labor and materials from the war effort. Va. Agr. Col. Ext. Cir. E-365, folder. [Blacksburg] 1924. 275.29 V81C

FLOODS AND FLOOD CONTROL

WOOD, HORACE W., JR. Flood flow on Missouri streams. Mo. Engin. Expt. Sta. Bul. 30, 86 pp. Columbia, 1942. 290.9 M69

FLOW OF WATER

HARDING, SAMUEL W., and WOOD, JOHN K. Model tests of flow into drains. Soil Sci. Soc. Amer. Proc. (1941) 6: 117-119. Morgantown, W. Va. [1942] 56.9 So3

PETTIS, C. R. Velocity formula - rivers and pipes. Ohio State Univ. Engin. Expt. Sta. News 14(5): 4-12. Dec. 1942. 290.9 Oh3En
Purpose of paper is to present a formula giving the relation between velocity, slope, hydraulic radius, and "roughness" of bottom, for the flow of water, in open channels, or in pipes, for the range of conditions most frequently encountered in engineering practice.

HEATING

HICOCK, HENRY W., OLSON, A. RICHARD, and SEELEY, LAUREN E. Wood-burning conversion unit for household furnaces. Conn. (State) Agr. Expt. Sta. Bul. 463, pp. 595-614. New Haven, 1942. 100 C76St

Project initiated to (a) study of the general and specific problems involved in the combustion of wood and (b) develop device for conversion purposes.

HOTBEDS AND COLLIERIES

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Object of the survey was to locate such cross-connections as existed in a typical county and to determine the extent to which these constitute potential health hazards. A cross section of the area was surveyed to estimate the total number of such connections which were present, to find out how the correction of these hazards should fit in with a public health program, and finally, to design a procedure for the elimination of the dangerous connections found.

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Covered concrete storage reservoirs can be designed by a "vertical-beam" method that offers advantages over conventional types. The method presented, utilizes side-walls constructed as simple verticle beams with supports arranged at top and bottom to resist the internal horizontal pressure. The designation "vertical beam" is taken from this wall construction. With such a design, all of the concrete in contact with the contained water is in compression. Simple methods are afforded for minimizing temperature and shrinkage stresses. These features reduce the formation of cracks on the interior face of the structure and prevent seepage into wall, and increase the resistance of structure to deterioration. These advantages are obtained without increase in construction cost over conventional types.

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- SCHULZ, ARTHUR H. Temporary grain storages. N. Dak. Agr. Col. Ext. Serv. Spec. Cir. A-27, folder. Fargo, 1942. 275.29 N812S
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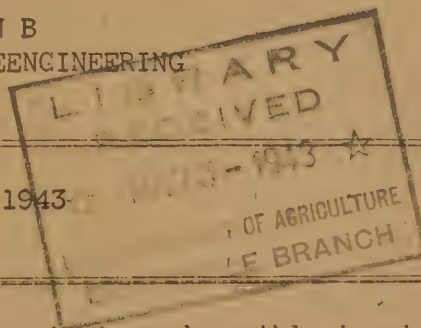
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SECTION B
AGRICULTURAL ENGINEERING

Vol. 2

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No. 2



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Vol. 2

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LARKE, GLENN R. New year promises auspicious progress in beet growing. Sugar Beet Jour. 8(4): 68-71. Jan. 1943. 66.8 Su38

Discusses types of harvesters and blocking machines.

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BINDER TWINE

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THE DEMAND for a cheap grain drier. Farm. Impl. & Mach. Rev. 68(812): 641-642. Dec. 1, 1942. 58.8 Im72

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614. Washington, D. C., 1942. 330.9 Am3

OWEN, J. C., and HALSTEAD, M. H. Measurement of wind- and moisture-
gradients over a reservoir. Amer. Geophys. Union. Trans., 1942,
pt. II, pp. 255-257. Washington, D. C., 1942. 330.9 Am3

For several years the Soil Conservation Service has been working
toward the development of a method for determining the evaporation
from land or water surfaces. Method employs wind and moisture
gradients in measuring the water-vapor transport from the surface
to the atmosphere.

POWELL, R. W. Further experiments on the evaporation of water from
saturated surfaces. Inst. Chem. Engin. [London] Trans. (1940) 18:
36-55. London [1943] 382 In72

Describes some earlier experiments carried out in connection with
an investigation into the laws governing the evaporation of water
into a stream of air.

FARM MACHINERY AND EQUIPMENT

JEEPS on the farm. Pop. Mechanics Mag. 79(1): 46-47, illus. Jan. 1943.
291.8 P81

- LYLE, S. P. Nation-wide farm equipment conservation program. Agr. Engin. 24(1): 13-14, 16. Jan. 1943. 58.8 Ag83
- MARVIN, VIRGIL. Ohio farmers crib corn with homemade electric elevators. Elect. on the Farm 16(1): 6. Jan. 1943. 335.8 E127
- RENTAL rates for farm machinery. Agr. Engin. 24(1): 15-16. Jan. 1943. 58.8 Ag83
- RETAIL implement price regulation as amended. Farm Impl. News 64(1): 16-18. Jan. 21, 1943. 58.8 F22
- Text of No. 133 as amended by Amendment No. 3, effective January 9.
- SHORTAGES threaten food goals. Impl. and Tractor 58(1): 14-15, 56. Jan. 2, 1943. 58.8 W41
- Discusses lack of adequate farm machinery in view of need for greater food production and shortage of farm labor.
- U. S. SECURITIES AND EXCHANGE COMMISSION. Survey of American listed corporations: Agricultural machinery and tractors, December 31, 1941. 53 pp., processed. Washington, D. C., 1942. 173.2 Se2Sur
- WATSON, J. A. SCOTT. Farm machinery in Britain's food production effort. Agr. Engin. 24(1): 11-12. Jan. 1943. 58.8 Ag83
- Discusses pooling of farm machinery.
- See also Beet machinery; Cotton machinery; Dairy plants and equipment; Drills; Feed grinders and grinding; etc.

FARM MACHINERY AND EQUIPMENT - RATIONING

- A FULL year's production under L-170 telescoped into six months. Farm Impl. News 64(1): 16-17. Jan. 7, 1943. 58.8 F22
- L-170 will be junked June 30 and an adequate production schedule set up with concentration modified. Distribution system under rationing announced.
- THE INDUSTRY'S year of frustration - 1942. Farm Impl. News 64(1): 38-41. Jan. 7, 1943. 58.8 F22
- Discusses the rationing of farm machinery.
- NEEDLER, L. L. Rationing of farm machinery. Agr. Engin. 24(1): 17-18. Jan. 1943. 58.8 Ag83
- TURNER, ARTHUR W. Wartime allocation of farm machines. Agr. Engin. 24(1): 22-24. Jan. 1943. 58.8 Ag83
- Report of a committee appointed July 1, 1942 to devise and recommend a plan for wartime allocation or rationing of critical farm machines.

FARM MACHINERY AND EQUIPMENT - REPAIR

- BUT RATES need adjustment. Impl. and Tractor 58(2): 11. Jan. 16, 1943. 58.8 W41
- Tabulation of survey of service charges by Wisconsin implement dealers.
- FETTEROLF, H. C. Vocational agriculture. Pa. Farmer 128(1): 22-23, 50, 53. Jan. 9, 1943. 6 P383
- Discusses work done in vocational agricultural schools in repairing farm machinery.
- GOPHERS want less "red tape." Farm Mach. and Equip., no. 1909, pp. 14, 16. Jan. 1943. 58.8 F225
- Minnesota convention asks for increased county quotas to offset farm labor shortage. Urges relief from service charge "squeeze."
- PARK, H. M. Importance of repair and service facilities. Farm Impl. News 64(1): 30. Jan. 7, 1943. 58.8 F22

FARM STRUCTURES

BEELER, M. N. Wartime cow housing. Capper's Farmer 54(1): 10, 16.
Jan. 1943. 6 M693

Pen-type barn will help farmers stay in the dairy business by reducing costs and chore labor.

HOPFEN, H. J. Improvements in rural building. Internatl. Inst. Agr. Monthly Bul. Agr. Sci. and Pract. [Reprint from Internatl. Rev. Agr.] 33(3): 110T-122T. Mar. 1942. 28 In8Mo

Possibilities of developing rural construction are examined in relation to the following: Disposal of the different rooms, arrangement of the buildings, their height, roof structure, structure of walls and ceilings, choice of building material and interior installations.

HOUSING for herd health. Hoard's Dairyman 88(2): 43. Jan. 25, 1943. 44.8 H65

KAISER, W. G. Concrete manure pit aids production. New England Homestead 116(2): 10. Jan. 23, 1943. 6 N442

LONG, J. DEWEY. Farm structures prefabrication. Agr. Engin. 24(1): 8, 10. Jan. 1943. 58.8 Ag83

Author states that "it is essential that farm structures engineers recognize the principles, current growth, and future possibilities of prefabrication, and adjust their activities to best accord with the changing situation..."

"It may safely be stated that prefabrication in the farm field is here to stay. It will not supplant conventional construction, but it will prove a worthy competitor in some items of farm construction because it renders a distinct service to the farmer."

OPEN SHED stables. Hoard's Dairyman 88(1): 13. Jan. 10, 1943. 44.8 H65

FEED GRINDERS AND GRINDING

AUTOMATIC grinding installation. Farm Impl. & Mach. Rev. 68(812): 640. Dec. 1, 1942. 58.8 Im72

Discusses the "Essex" grinder.

FENCES

WYBLE, EUGENE. Electric fence developments. Hoard's Dairyman 88(2): 59. Jan. 25, 1943. 44.8 H65

FERTILIZER PLACEMENT

FAIRBANK, J. P., and MINGES, P. A. Accurate fertilizer applicator for field test plots. Amer. Soc. Hort. Sci. Proc. 41: 310-314. Sept. 1942. 81 Sol2

FIRE PROTECTION

TINDALL, CORDELL. They'll fight any farm fire. Mo. Ruralist 84(1): 3, 14. Jan. 9, 1943. 6 R8891

Discusses rural fire departments in St. Charles County.

FLAX

IMPROVED machines handle fiber flax. Farm Impl. News 64(1): 42. Jan. 7, 1943. 58.8 F22

Industry does not yet have mechanical equipment comparable to the machines used on major crops, but engineers expect rapid progress now that a start has been made.

FLOODS AND FLOOD CONTROL

BARROWS, H. K. Study of valley-storage and its effect upon the flood-hydrograph. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 483-488. Washington, D. C., 1942. 330.9 Am3

Object of paper is the study of the effect of valley-storage upon the form of the flood-hydrograph and the relative amount of such storage available upon river-basins of different sizes and flow-characteristics.

BERNARD, MERRILL. Primary role of meteorology in flood flow estimating. Amer. Soc. Civ. Engin. Proc. 69(1): 105-144. Jan. 1945. 290.9 Am3P

Reports on certain progressive developments in applied hydrology.

Glossary of meteorological terms, pp. 142-144.

BOSTON SOCIETY OF CIVIL ENGINEERS. COMMITTEE ON FLOODS. Report. Boston Soc. Civ. Engin. Jour. 29(1, sect. 2): 1-160. Jan. 1942. 290.8 B65

General description of the 1936 and 1938 floods in New England, pp. 9-26; Storm rainfall, pp. 27-57; 1936 and 1938 flood runoff data, pp. 58-72; Flood runoff analysis, pp. 73-114; Flood losses and economics, pp. 115-129; Flood control programs and works, pp. 130-143; Flood warnings and flood emergency provisions, pp. 144-157.

BUSH, BERNARD S., and BARRICK, M. J. Emergency experiences during flash floods. Amer. Waterworks Assoc. Jour. 35(1): 81-92. Jan. 1943. 292.9 Am32J

Discusses conditions in Pennsylvania.

FRANK, BERNARD. Some aspects of the evaluation of watershed flood control projects. Jour. Land and Pub. Util. Econ. 18(4): 391-411. Nov. 1942. 282.8 J82

Contents: Scope and characteristics of the flood program; Peculiarities of watershed flood control as affecting evaluation methods; Types of ownership on which watershed work may be undertaken; Some significant limitations of watershed operations; To what extent should individual physical measures be evaluated separately?; Effects of crop land measures; Forest land measures; Effects of fire control; Supplementary engineering measures; To what extent should the remedial program be divided among ownership classes for purposes of separate evaluation?; Flood control vs. over-all cost benefit ratios; Significance of program evaluation by ownership classes; Effects of partial application of programs; Should monetary considerations be the sole criterion for determining the economic justification of flood programs?; Estimation of "unevaluable" benefits; Selective justification of watershed projects; Tentative conclusions.

GUMBEL, E. J. Statistical control-curves for flood-discharges. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 489-509. Washington, D. C., 1942. 330.9 Am3

Purpose of this article is to simplify and, at the same time, improve the determination of the constants, to establish confidence limits for the flood-discharges, and to indicate several methods of comparison between theory and observation.

FLOW OF WATER

DeLAPP, WARREN. Entrainment of air in flowing water: A symposium: Discussion. Amer. Soc. Civ. Engin. Proc. 69(1): 166-169. Jan. 1943. 290.9 Am3P

HORTON, ROBERT E. Experiment on flow through a capillary tube. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 534-544. Washington, D. C., 1942. 330.9 Am3

GRAIN DRILLS

GOWDER, M. T. Grain drill repairs and adjustments. Tenn. Agr. Col. Ext. Leaflet 56, 4 pp. Knoxville, 1943. 275.29 T25L

HARVESTING MACHINERY

STRUTHERS, D. K. Harvesting soybeans. Iowa State Col. Agr. Ext. Pam. 46, folder. Ames, 1942. 275.29 Io9Pa

HAY MAKING MACHINERY

ARNOLD, E. H. Essentials in good haymaking. New Zeal. Jour. Agr. 65(5): 261-264. Nov. 16, 1942. 23 N48J

Care of machinery; Mowing practice; Curing; Stacking; Baling hay. EVANS, DURRELL. A survey of newer haymaking methods on western Nevada farms. Nev. Agr. Expt. Sta. Farm Mangt. Bul. 3(5): 1-9, processed. Dec. 1942. 100 N414F

A study of the use of labor-saving machinery in harvesting hay in Churchill, Douglas, and Lyon Counties, Nevada, in 1942. MACHINE cuts up hay and blows it into wagon. Pop. Mechanics Mag. 79(1): 87. Jan. 1943. 291.8 P81

Hay is picked up from a windrow and chopped into short lengths by a new type of cutter that also blows it into a wagon box. The machine, which is pulled by a tractor, cuts hay or straw into lengths that can be varied by adjustment of the cutter blades. It is operated by half the crew required to run a baler in the field. MORISON, F. L. A study of the newer hay harvesting methods on Ohio farms. Ohio Agr. Expt. Sta. Bul. 636, 16 pp. Wooster, Oct. 1942. 100 Oh3S

This study "was made to secure information on the machinery investments, labor requirements, and total costs of putting up hay by various new methods, and the advantages and disadvantages of each." The area covered in the study included Van Wert County, most of Hardin County, and parts of Allen, Hancock, and Putnam Counties.

HEATING

WILLEY, E. C. Saving fuel in Oregon homes. Oreg. Engin. Expt. Sta. Cir. 7, 36 pp. Corvallis, 1942. 290.9 Or33C

HEMP

BAER, FRANK L. Hemp program now progressing rapidly, "frozen" purchases near final round-up. Cord Age 38(6): 7-8. Dec. 1942. 73.8 C812

Commodity Credit Corporation sets up special division to operate hemp project and supervise working of seventy-one mills. For additional references on hemp see Section D, Plant Science, under subject Cotton and Other Fiber Plants.

HOTBEDS AND COLDFRAMES

PORTER, ALTON M., and ODLAND, MARTIN L. Influence of methods of heating and covering electric hotbeds on field production of vegetables. Amer. Soc. Hort. Sci. Proc. 41: 251-254. Sept. 1942. 81 Sol2

A detailed study, under present day conditions, of the relative effects of electric cable and incandescent lamp methods of hotbed heating and film as compared to glass covered hotbeds on the plant growth and ultimate yield in the field is reported in paper.

HOUSES. REPAIRING

WHITMAN, ROGER B. First aid for the ailing house. Ed. 3, rev., 359 pp. N. Y., McGraw-Hill book co., inc., 1942. 323 W59

Includes much information on substitutes for the building materials that are now on the priority lists; also instructions for extending the life of parts of houses that are likely to wear.

HYDROLOGY

POTTER, W. D., and LOVE, S. K. Hydrologic studies at the Coon creek demonstration project, SCS-WIS-L, Coon valley, Wisconsin. Compilation of rainfall, run-off and soil loss from the Little LaCrosse river and Coon creek watersheds, 1939-40. Charts. Washington, D. C., U. S. Soil conservation service [1942] 1.96 Ad6Tp

Prepared under the direction of C. E. Ramser and W. D. Collins.

POTTER, W. D., and LOVE, S. K. Hydrologic studies at the South Fork Palouse river demonstration project, SCS-Wash-1, Pullman, Washington. Compilation of rainfall, run-off and soil loss from the South Fork Palouse river, Fourmile creek and Missouri Flat creek, 1939-40. Charts. Washington, D. C., U. S. Soil conservation service [1942] 1.96 Ad6Tp

Prepared under the direction of C. E. Ramser and W. D. Collins.

RAMSER, C. E. Application of hydrology to soil and water conservation. 27 pp., processed. Washington, D. C., U. S. Soil conservation service, Office of research, 1941. 1.96 R31Ap

Paper with slight changes presented at the Hydrology Conference held at State College, Pennsylvania, June 30-July 2, 1941.

SHARP, A. L., and HOLTAN, H. N. Extension of graphic methods of analysis of sprinkled-plot hydrographs to the analysis of hydrographs of control-plots and small homogeneous watersheds. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 578-593. Washington, D. C., 1942. 330.9 Am3

Proposed method of extending and adapting the graphic method of analyzing sprinkled-plot hydrographs.

INSULATION

HEIMPEL, L. G. Insulating buildings for farm stock. Farmer Mag. 40(1): 48-49. Jan. 1943. 7 C165

IRRIGATION

BIRD, JOHN A. Western ground waters and food production. U. S. Dept. Agr. Misc. Pub. 504, 40 pp. Washington, D. C., 1942. Reference material. 1 Ag84M

Issued in collaboration with the Water Utilization Planning Service, Bureau of Agricultural Economics.

Tells of early irrigation developments, the place of irrigation in western agriculture and describes and discusses ground water and ground water law. Includes recommendations for joint land-water use and development in the Republican River Basin.

JONES, BURLE J., and BROWN, J. B. Irrigated pastures in California. Calif. Agr. Col. Ext. Cir. 125, 47 pp. Berkeley, 1942. 275.29 C12C
ORIVE ALBA, ADOLFO. Aspecto técnico de la irrigación. Irrig. en Mex. 23(4): 5-17. July-Aug. 1942. 58.8 Ir76

Address, January 16, 1942, before students of the Economics Faculty of the Universidad Nacional Autónoma de México.

Includes discussion of the insufficiency of Mexican agricultural production, the characteristics of the various zones, and the need for developing irrigation works. Includes as well the possibilities of utilizing the waters of the country in irrigation, and a brief historical summary of the development of irrigation in the country.

The present agricultural situation in its relation to irrigation and future possibilities are described.

U. S. BUR. OF AGRICULTURAL ECONOMICS. DIV. OF LAND ECONOMICS. WATER UTILIZATION SECTION. Water utilization in north central Washington irrigated area. 71 pp., processed. Washington, D. C., 1941. 1.941 L7W293

Report prepared as a part of the Water facilities area planning activities in the Okanogan and Methow Rivers watersheds, following a reconnaissance survey of water utilization in the north central Washington irrigated area.

LIGHTING

McKINLAY, HELEN G. New fields for war-time lighting on the farm. Ohio Farmer 191(2): 5-35. Jan. 16, 1943. 6 Oh3

MOTOR FUELS

ERSATZ gasoline. Business Week, no. 697, pp. 54, 56, 59. Jan. 9, 1943. 280.8 Sy8

Charcoal-burning unit is replacing gas in Brazil's motor vehicle as a wartime device.

SOARES PEREIRA, MOACYR. O problema do álcool-motor. 195 pp. Rio de Janeiro, Livraria José Olympio, 1942. 401 Sol2

MOTORS, ELECTRIC

DON'T STARVE your motor. Elect. on the Farm 16(1): 13-14. Jan. 1943. 335.8 E127

Article on use, care and repair of equipment and how to save service on it.

RIMBACH, F. L. Protect your present motors. New England Homestead 116(2): 8. Jan. 23, 1943. 6 N442

WIANT, D. EMERSON. Protection for fractional horse power motors. Mich. Agr. Expt. Sta. Quart. Bul. 25(2): 132-135. Nov. 1942. 100 M58S

MOWING MACHINES

RAMBO, EARLE K., and MARTIN, G. E. Mower repairs and adjustments.
Tenn. Agr. Col. Ext. Pub. 240, 16 pp. Knoxville, 1942. 275.29 T25

PAINTS AND PAINTING

PAINT protects insulating boards in poultry houses. DuPont de Nemours,
E. I. & Co., Agr. News Letter 11(1): 16. Jan.-Feb. 1943. 6 D92

PLOWS

KRANICK, FRANK. Plows for special jobs. Impl. and Tractor 58(2): 14-15. Jan. 16, 1943. 58.8 W41

KRANICK, FRANK. Working hints about disk plows. Pt. 3: Farm equipment for mechanical power. Impl. and Tractor 58(1): 16-17, 56-57. Jan. 2, 1943. 58.8 W41

POULTRY HOUSES AND EQUIPMENT

CARTER, C. W. Texas poultry house is roomy. Farmer-Stockman 56(1): 22. Jan. 1943. 6 Ok45

POULTRY-HOUSE construction provides one contractor with good business. Concrete 51(1): 14, 24. Jan. 1943. 299.8 C743

SMITH, R. K. Victory gardens and farm poultry in war production as influenced by electricity. Rural Electrification Exch. 5(4): 89-90, 92. Fourth quart., 1942. 335.8 R882

General discussion recommending that man must use new methods, machines, time and labor savers, produce more in less time, and, that indications are, that they will be expected to produce more in less time with less equipment.

VERNON, W. M., WHITFIELD, W. R., and VAN VLACK, C. H. Hens housed in the barn. Iowa State Col. Agr. Ext. Pam. 50, folder. Ames, 1942. 275.29 I09Pa

WHAT'S wrong with your brooder house? Capper's Farmer 54(1): 11, 33. Jan. 1943. 6 M693

See also Blackouts in war; Brooders; Paints and painting.

PUMPS AND PUMPING

ELECTRIC flood pump. New Zeal. Jour. Agr. 65(5): 293. Nov. 16, 1942. 23 N48J

MYERS, F. E. & BRO. CO. Points to check on ejector pumps. Impl. and Tractor 58(1): 30-31. Jan. 2, 1943. 58.8 W41

Itemizes points to aid servicemen in locating trouble because of pump's failure to deliver water, insufficient capacity or pressure, or because pump starts and stops too often.

STAHL, E. G. Utilization for pumping loads. Elect. West 90(1): 56-58. Jan. 1943. 335.8 J82

Utility companies can net dividends, help farmers increase production by engineering irrigation equipment.

QUICK FREEZING

QUICK freezing systems: The "Polyphase" process and other modern methods - a survey. Mod. Refrig. 45(537): 221-222, 226. Dec. 17, 1942. 295.8 M72

RAINFALL AND RUNOFF

- BERNARD, MERRILL, chairman. Report of committee on rainfall, 1941-42. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 393-441. Washington, D. C., 1942. 330.9 Am3
- SHOWALTER, A. K., and SOLOT, S. B. Computation of maximum possible precipitation. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 258-274. Washington, D. C., 1942. 330.9 Am3

REFRIGERATION

- BAY, T. J. Refrigeration installations aboard naval vessels. Refrig. Engin. 45(1): 17-19. Jan. 1943. 295.9 Am32J
- Outlines chief problems confronting designers of refrigeration equipment.
- BRODY, M. KENNETH, and ARENS, EGMONT. Post-war refrigerator. Refrig. Engin. 45(1): 7-9, 52. Jan. 1943. 295.9 Am32J
- Suggests that the refrigerator of the future should have a simpler method of getting ice cubes, an easier method of defrosting, more desirable distribution of storage space, reduced weight, should be easier to clean and should fit into any kitchen.
- COMIN, DONALD. Refrigeration as an aid in winning the war on the farm. Refrig. Engin. 45(2): 82, 116. Feb. 1943. 295.9 Am32J
- THOMSEN, L. C. Conservation of power through efficient operation of refrigerating equipment. Milk Plant Monthly 31(12): 53-54, 56-58, illus. Dec. 1942. 44.8 C864
- Also in Ice Cream Rev. 26(5): 24, 26, 58-61, illus. Dec. 1942. 389.8 Ic22

Some of the possible conditions which may serve as a basis for economizing on refrigeration are presented under the general headings of suction pressures, discharge pressures, and operations indirectly connected with refrigeration. A few definitions are included.

RESERVOIRS

- SOUTH AFRICA. DEPT. OF AGRICULTURE AND FORESTRY. DIV. OF SOIL AND WELD CONSERVATION. Reinforced circular reservoirs. So. Africa. Dept. Agr. and Forestry. Bul. 234, ed. 3, 44 pp. Pretoria, 1942. 24 So84P
- Reinforced brick reservoirs, pp. 3-22; Reinforced concrete reservoirs, pp. 23-31.

SAWS

- FITTING and filing farm saws: Directions for hand and rip saws, and rip and cordwood circular saws. Country Guide 62(1): 24. Jan. 1943. 7 G76
- ROOT, F. S. Motorized buck-saw. Elect. on the Farm 16(1): 15. Jan. 1943. 335.8 E127
- Details of construction.

SEWAGE IRRIGATION

- USE OF septic tank effluent on vegetable crops. Agr. Gaz. N. S. Wales 53(10): 480. Oct. 1, 1942. 23 N472
- Statement as to the dangers.

SILOS

- EUDALY, E. R. Constructing trench silos. Acco Press 20(12): 12.
Dec. 1942. 6 Ac2

SILT

- ANDERSON, ALVIN G. Distribution of suspended sediment in a natural stream. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 678-683. Washington, D. C., 1942. 330.9 Am3
- BLAISDELL, FRED W. Use of sand-beds for comparing relative stilling-basin performance. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 633-639. Washington, D. C., 1942. 330.9 Am3
- Data presented are abstracted from the results of tests made on six different models of culvert-outlets.
- BRUNE, GUNNAR M. Island-formation and channel-filling on the upper Wabash river. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 657-663. Washington, D. C., 1942. 330.9 Am3
- Object of study: (1) to determine to what extent the upper Wabash River is filling or enlarging its channel; (2) to evaluate the effects of this process on flood-frequencies; and (3) to make a study of the possible causes of the phenomena observed. The work was done as part of a flood-control survey made by the Department of Agriculture.
- JOHNSON, J. W. Use of mass-curves in evaluating suspended-load observations on small Piedmont streams. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 664-678. Washington, D. C., 1942. 330.9 Am3
- KALINSKE, A. A. Criteria for determining sand-transport by surface-creep and saltation. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 639-643. Washington, D. C., 1942. 330.9 Am3
- KIRKHAM, DON. Modification of a theory on the relation of suspended to bed-material in rivers. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 618-621. Washington, D. C., 1942. 330.9 Am3
- KRUMBEIN, W. C. Settling-velocity and flume-behavior of non-spherical particles. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 621-633. Washington, D. C., 1942. 330.9 Am3
- Purpose of this paper is to test the effect of shape on particle-transportation in flumes, and to relate the behavior to the settling-velocities of the particles. The data are confined to the bed-movement of single particles of different shapes, but the results show at least the order of magnitude of the shape-factor during stream-transportation, and indicate that in some instances this factor may be as important as size.
- LANGBEIN, W. B. Hydraulic criteria for sand-waves. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 615-618. Washington, D. C., 1942. 330.9 Am3
- Sand-waves are significant to the extent that they are associated with sediment-transportation during floods when so much of the changes in channels take place. Other influences of sand-waves on height of flooding are probably more or less secondary.
- LOVE, S. K., and BENEDICT, P. C. Sediment loads in the Moore creek drainage-basin, Idaho, 1939-40. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 652-657. Washington, D. C., 1942. 330.9 Am3

TERZAGHI, KARL. Measurements of pore-water pressure in silt and clay. Civ. Engin. 13(1): 33-36. Jan. 1943. 290.8 C49

Analyzes current methods for their relative dependability and ease of application. Describes use of the elastic-wire strain meter to determine their pressure and discusses the results of field tests that have been made with the device.

SOIL MOISTURE

ANDERSON, ALFRED B. C., FLETCHER, JOEL E., and EDLEFSEN, N. E. Soil-moisture conditions and phenomena in frozen soils. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 356-371. Washington, D. C., 1942. 330.9 Am3

Discusses briefly some of the general characteristics of observations in laboratory and field related to freezing of soil moisture. Also considers the basic thermo-dynamic theory requisite to an interpretation of these observations in relation to the movement of moisture associated with frozen soils.

DONNELLY, MAURICE. Water-storage by California hill soils in the season of excessive rainfall, 1940-41. Amer. Geophys. Union. Trans., 1942, pt. II, pp. 544-553. Washington, D. C., 1942. 330.9 Am3

Data presented are from hill-culture studies made primarily to determine economic erosion-control measures for improvement of land use in the lima bean erosion-problem area of California.

SPRAYS AND SPRAYING EQUIPMENT

BATCHELDER, C. H., and COSENZA, A. V. Hand-operated equipment for precision dusting. 2 pp., processed. Washington, D. C., U. S. Bur. of entomology and plant quarantine, 1942. 1.9 En83Et

DUPREE, MINTER, and MATHIS, WILLIS. Power-driven mixer for making oil emulsions. 2 pp., processed. Washington, D. C., U. S. Bur. of entomology and plant quarantine, 1942. 1.9 En83Et

POTTS, S. F. Equipment available for applying concentrated sprays. 5 pp., processed. Washington, D. C., U. S. Bur. of entomology and plant quarantine, 1942. 1.9 En83

STORAGE OF FARM PRODUCE

ALLNUTT, R. B. Method of storing sweet potatoes. East African Agr. Jour. 7(2): 73. Oct. 1942. 24 Ea74

EDGAR, ALFRED D., JEFFERSON, C. H., and WHEELER, E. J. Potato storages for Michigan. Mich. Agr. Expt. Sta. Spec. Bul. 320, 39 pp. East Lansing, 1942. 100 M58S

VAN VLACK, C. H. Soybean storage. Iowa State Col. Agr. Ext. Pam. 45, folder. Ames, 1942. 275.29 Io9Pa

WOOLEY, J. C. Emergency storage for soybeans. Mo. Agr. Expt. Sta. Cir. 240, 4 pp. Columbia, 1942. 100 M693

For additional references on storage of farm produce see Section F, Food Processing and Distribution.

SWINE HOUSES AND EQUIPMENT

HANSEN, E. L. Confinement system of producing pork. Agr. Engin. 24 (1): 9-10. Jan. 1943. 58.8 Ag83

THRESHING MACHINES

FRASER, J. G. C., KALBFLEISCH, W., and ARMSTRONG, J. M. New miniature thresher. Sci. Agr. 23(3): 183-186. Nov. 1942. 7 Sci2

TIRES

WIRE SPOOLS serve as wheels for a homemade tractor. Pop. Mechanics Mag. 79(2): 77. Feb. 1943. 291.8 P81

In place of ordinary wheels, the round ends of big spools used for handling and transporting telephone wire were substituted. They are strongly made of wood, are inexpensive, puncture proof, and give excellent mileage. The rear wheels, slightly larger in diameter than the front ones, gain increased traction from short chains fastened at right angle to the tread.

WOOD TIRES for farm tractors made with lugs on rim. Pop. Mechanics Mag. 79(1): 56. Jan. 1943. 291.8 P81

Wooden lugs attached to the rims of tractor wheels are substituting for rubber tires on the tractors owned by many Kansas wheat farmers. The lugs are fastened to the rims by iron rods and about 15 are required for each wheel. They are applied at an angle across the rim and slightly tapered to give a bearing surface on the ground of about an inch and a half. Farmers report that the lugs give plenty of traction and cause little additional vibration. They were developed by the Office of Price Administration in Wichita.

TRACTORS

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SPAIN. DIRECCION GENERAL DE ESTADISTICA. Alemania: El empleo de máquinas agrícolas en Alemania. Spain. Dir. Gen. de Estadís. Bol. de Estadís., no. 14, pp. 237-238. June 1942. 263 Spl2

Gives results of the German census of agricultural machinery of 1939, giving numbers of machines of various types for 1939 compared with 1933.

STODDARD, CARLTON. Down tomorrow's machinery row. Successful Farming 41(2): 24, 62, 63, illus. Feb. 1943. 6 Sul2

STRAIGHT, GEORGE. Custom work. A man's place is in his place of business. Impl. and Tractor 58(4): 25, 65. Feb. 13, 1943. 58.8 W41

Arguments against custom work presented by an implement and tractor dealer in Kansas.

USE AND care of screw drivers. Impl. and Tractor 58(4): 46, 48, 50. Feb. 13, 1943. 58.8 W41

"WE MUST mechanise war-time agriculture." Start to be made with navy bean harvesters. Country Life [Sydney] 54(23): 3. Dec. 4, 1942. 286.85 Sy2

"Man-power shortage and the imperative need to save time and labor, under war-time pressure for increased production of essential food-stuffs, have taught Australian agricultural experts how really deficient this country is in the mechanisation of its farming methods.

"It is hoped that new machines, of American design, to be used for the harvesting of the next crop of navy beans will mark the beginning of a new policy of constructing in Australia time and labor-saving machines for sowing and harvesting various crops."

Use of machinery in England and America is brought out.

WRIGHT, S. J. Farm implements and machinery. Roy. Agr. Soc. England Jour. 103: 61-69. References. 1942. 10 R81

The general situation is reviewed under the following headings: General farm mechanization; Grassland improvement, land reclamation, etc.; Tractors; Rowcrop cultivations; Combine harvesting, grain drying, etc.

SEE ALSO Beet Machinery; Dairy Plants and Equipment; Harvesting Machinery; etc.

FARM MACHINERY AND EQUIPMENT - COSTS

AMERICAN SOCIETY OF AGRICULTURAL ENGINEERS. Rental rates for machinery. Farmer 61(2): 6. Jan. 23, 1943. 6 F2211

Includes a table showing basic rental rate per hour per \$100 of new cost for various farm implements.

FIGURING prices on used farm machines. Dakota Farmer 63(3): 50. Feb. 6, 1943. 6 D14

MUMFORD, D. CURTIS, KENNEDY, VIRGIL D., and DAVIS, GEORGE B. Cost of operating power equipment on Oregon farms. Oreg. Agr. Expt. Sta. Bul. 409, 32 pp. Corvallis, June 1942. 100 Or3

"The information presented in this bulletin represents the cost of operating a total of 358 tractors, 155 combines, 159 farm trucks, 49 pickups, and 321 farm automobiles in the Willamette Valley and Columbia Basin." Data are summarized from studies made in 1938, 1940, and 1941.

PAGE, S. L. Co-operative use of farm machinery. Farmer's Mag. 40(2): 33. Feb. 1943. 7 C165

Table gives cost per hour for operating farm machinery.

U. S. OFFICE OF PRICE ADMINISTRATION. Retail prices for farm equipment. Fed. Register 8(37): 2286. Feb. 23, 1943. 169 F31

Maximum Price Regulation 133, Amendment 4.

Establishes method of setting base prices for used equipment.

FARM MACHINERY AND EQUIPMENT - RATIONING

U. S. CONGRESS. SENATE. SPECIAL COMMITTEE INVESTIGATING THE NATIONAL DEFENSE PROGRAM. Investigation of the national defense program. Additional report...pursuant to S. Res. 71 (77th Congress)...Interim report on farm machinery and equipment. 78th Cong., 1st Sess. Senate Rpt. 10, pt. 2, 25 pp. Washington, D. C., U. S. Govt. print. off., 1943. Harry S. Truman, Chairman.

War Production Board order L-170, restricting 1943 farm machine production to 23 % of that of 1940, is seen as a serious threat to increased food production. The Committee recommends completion of the program by June 30, and development of a more adequate program for the year beginning July 1, 1943.

"Summary and recommendations" reprinted in Farm. Mach. and Equip., no. 1910, pp. 5-7. Feb. 1943. 58.8 F225

Reviewed in Impl. and Tractor 58(4): 22-23, 63-65. Feb. 13, 1943. 58.8 W41

U. S. FOOD PRODUCTION ADMINISTRATION. Farm machinery and equipment. Fed. Register 8(29): 1825; 1826. Feb. 11, 1943. 169 F31

Interpretation 4 under Food Production Order 3.

U. S. FOOD PRODUCTION ADMINISTRATION. New farm machinery and equipment. Fed. Register 8(31): 1911, 1912-1913. Feb. 13, 1943. 169 F31

Amendment 1 to Supplementary Order 3, Food Production Order 3.

Provides for changes in distribution of new farm machinery and equipment.

U. S. FOOD PRODUCTION ADMINISTRATION. New farm machinery and equipment. Fed. Register 8(38): 2321. Feb. 24, 1943. 169 F31

Food Production Order 3, Amendment 3.

U. S. WAR PRODUCTION BOARD. Farm machinery and equipment and attachments and repair parts therefor. Fed. Register 8(31): 1939-1951. Feb. 13, 1943. 169 F31

Limitation Order L-170, as amended Feb. 12, 1943.

FARM MACHINERY AND EQUIPMENT -- REPAIR

ADJUSTMENT of shop rates on way - Western told. Impl. and Tractor 58(3): 22-23. Jan. 30, 1943. 58.8 W41

"OPA representative predicts early announcement of new hourly shop ceiling."

DAVIDSON, J. BROWNLEE. Prepare for seedtime. Successful Farming 41(2): 38, illus. Feb. 1943. 6 Sul2

"The most important function of seeders, grain drills, and corn planters is accuracy in amount of grain seeded, uniform distribution, and proper covering of the seed. It's important that they last for the duration, until new machines are available."

FISKE, PROCTOR M. Metallizing - war's new hero of maintenance. How the gun that sprays molten metal on worn parts offers salvation to farmers and dealers by salvaging for renewed use. Farm Impl. News 64(3): 19-20, 22. Feb. 4, 1943. 58.8 F22

Describes operation and uses of Mogul metal-spraying gun.

JOHNSON, LAMONT. Training for war aid. West. Farm Life 45(3): 3, 10. Feb. 1, 1943. 6 R153.

Discussion of a rural war production training plan, offering free instruction on farm machinery repair and methods of increasing production of commodities.

KEARNEY, DELMER. Custom work. \$6,000 extra income helps pay expenses. Impl. and Tractor 58(4): 24, 61. Feb. 13, 1943. 58.8 W41

This implement and tractor dealer in Ontario finds custom work profitable to him and a service to the farmers in the community.

NEWMAN, ELLEN. Make farmers realize that every usable machine must be ready when needed. Farm Impl. News 64(3): 32. Feb. 4, 1943. 58.8 F22

THEY must run again. Capper's Farmer 54(2): 12, 25. Feb. 1943. 6 M693

Discusses repairing of farm machinery.

FARM STRUCTURES

ARKANSAS. UNIVERSITY. COLLEGE OF AGRICULTURE. EXTENSION SERVICE.

Farm dairy buildings. 9 pp., plans. [Little Rock, 1942?]

275.2 Ar4Fd

CARTER, DEANE G. Salvage can swing it. Successful Farming 41(2): 24, 46-47, illus. Feb. 1943. 16 Sul2

"Critical needs for livestock and grain shelter can be filled from reworked, obsolete buildings that are now only eyesores."

CHEAP structure may house cows. Wash. Farmer 68(3): 10. Feb. 11, 1943. 6 R151

A pen barn or shed may be utilized temporarily if special precautions are taken.

CURTIS, HUGH. Efficient farm buildings a wartime need. Agr. Engin. 24(2): 46-47, 50. Feb. 1943. 58.8 Ag83

Paper presented at meeting of American Society of Agricultural Engineers, Chicago, Ill., Dec. 7, 1942.

EKBLAW, K. J. T. Forecast: a bumper crop of farm building. Amer. Builder and Bldg. Age 65(1): 49-51, 81-83. Jan. 1943. 296.8 Am3

Average of \$3,000 per farm will provide \$20,000,000,000 total market. Immediate program calls for \$600,000,000 of essential repairs.

HAMILTON, C. L. Wartime farm building construction. Agr. Engin.

24(2): 43-45. Feb. 1943. 58.8 Ag83

Paper presented Dec. 7, 1942, at the fall meeting of the American Society of Agricultural Engineers at Chicago, Illinois. A contribution of the Farm Structures Division.

AN IMMEDIATE farm job: Rebuilding old barns. Amer. Builder and Bldg. Age 65(1): 50-51. Jan. 1943. 296.8 Am3

Steps in salvaging farm structures with new concrete basis.

WALK-THROUGH type barn and milk house. Amer. Builder and Bldg. Age 65(2): 51, illus. Feb. 1943. 296.8 Am3

FENCES, ELECTRIC

ELECTRICAL fence repairing. Better Farm Equip. and Methods 15(3): 26. Jan.-Feb. 1943. 58.8 B46

"A big aid in repairing or replacing old worn out fences is the electric fence controller."

FERTILIZER PLACEMENT

ARKANSAS AGRICULTURAL EXPERIMENT STATION. Fertilizer placement.

Ark. Agr. Expt. Sta. Ann. Rpt. (1942) 54 (Bul.428): 49.

Fayetteville, 1942. 100 Ar42

"Experiments with the placement of fertilizers on vegetables have proved that, by concentrating the fertilizers close to the plants, the efficiency of the applications is increased in the case of amounts up to 750 pounds per acre of 4-12-4 or similar analyses. The most economical method of applying fertilizer is to place it in a narrow band or drill on both sides, approximately 3 inches away and slightly below the seed or roots of the plants. The next best method is to place the fertilizer on only one side of the seed. Another good method for using small amounts of fertilizer is to plow out a furrow where the seed is to be placed, scatter the fertilizer in the bottom, cover with 2 inches of soil, and plant on top of the dirt."

CHAPMAN, C. J. Plow-sole fertilizers make good showing. Better

Crops with Plant Food 27(1): 17-18, 42-43. Jan. 1943. 6 B46

Discusses experiments in the placement of fertilizers.

HAWTHORN, LESLIE R. New machine used to fertilize onions in Texas.

Market Growers Jour. 72(2): 42, 45, illus. Feb. 1, 1943. 6 M34

"The machine was constructed to cover six rows or low ridges at one operation, placing the necessary fertilizer beneath the rows and leaving a mark every three and one-half inches on the ridges to indicate where the onion plants were to go."

MAINE AGRICULTURAL EXPERIMENT STATION. Hi-lo fertilizer placement.
Maine Agr. Expt. Sta. Bul. 411, p. 310. Orono, June 1942.
100 W27E

Experiments with potatoes.
A SIMPLE new artificial manure distributor. Farm Impl. & Mach.
Rev. 68(813): 735-736. Jan. 1, 1943. 58.8 Im72

FLOORS

SLAB FLOORS for basementless house. Amer. Builder and Bldg. Age
65(1): 70, 84-85. Jan. 1943. 296.8 Am3
How to insulate and moistureproof concrete floors laid directly
on the ground.

FLOW OF WATER

GUNDER, DWIGHT F. Profile curves for open-channel flow. Discussion.
Amer. Soc. Civ. Engin. Proc. 69(2): 297-298. Feb. 1943.
290.9 Am3P

Discussion of paper by the writer in the April 1942 issue of the
Proceedings.
KENNISON, KARL R. Entrainment of air in flowing water; a symposium.
Discussion. Amer. Soc. Civ. Engin. Proc. 69(2): 306-310. Feb. 1943.
290.9 Am3P

The symposium appeared in the Sept. 1942 issue of the Proceedings.
ROHWER, C. P. The use of current meters in measuring pipe discharges.
Colo. Agr. Expt. Sta. Tech. Bul. 29, 40 pp. Fort Collins, Sept. 1942.
100 C71S

YOUNGQUIST, C. V. Stream flow during the 1942 water year. Ohio.
Univ. Engin. Expt. Sta. News 15(1): 11-13. Feb. 1943. 290.9 Oh3En

GREENHOUSES

ROBERTS, J. All-electric greenhouse. Wash. Agr. Expt. Sta. Bul.
425, p. 11. Pullman, Dec. 1942. 100 W27E

"Further studies...showed a decided advantage in the use of a
small automatic ventilator...making it possible to hold the inside
temperature to below 70° F. on bright sunny winter days."

HARROWS

GOWDER, M. T. Care of the disk harrow. Tenn. Agr. Col. Ext. Serv.
Leaflet 53, 4 pp. Knoxville, 1943. 275.29 T25L

KRANICK, FRANK. Today's disk harrow. Impl. and Tractor 58(3):
20-21, 24, illus. Jan. 30, 1943. 58.8 W41

KRANICK, FRANK. Today's harrows. Installment six "of Power farm
equipment." Impl. and Tractor 58(4): 28-29. Feb. 13, 1943.
58.8 W41

Peg tooth and spring tooth harrows are described.

HARVESTING MACHINERY

MCCALLUM, ROY D. Growing and handling garlic in California.
Calif. Agr. Col. Ext. Cir. 84, rev., 18 pp., illus. Berkeley, Feb. 1934,
rev. Nov. 1942. 275.29 C12C

Revised by J. E. Knott.

Irrigation, pp. 8-9; Harvesting, pp. 10-13; Storing, p. 13.

TENNESSEE. UNIVERSITY. COLLEGE OF AGRICULTURE. DIV. OF EXTENSION.

Clover stripper - hand operated. Tenn. Agr. Col. Ext. Spec. Cir. 171, 1 p., processed, diagrs. [Knoxville] 1942. 275.29 T25C

HAY MAKING MACHINERY

IOWA. STATE COLLEGE OF AGRICULTURE. Labor, power and equipment requirements of various methods of harvesting, transporting, processing and storing hay. Iowa State Dept. Agr. Iowa Yearbook of Agr. (1941) 42: 506-507. Des Moines, 1942. 2 Ie9R

Report of tests.

MORISON, F. L. Study of the newer hay harvesting methods on Ohio farms. Ohio Agr. Expt. Sta. Bul. 636, 16 pp. Wooster, 1942. 100 Oh3S
Study made to report information on the machinery investments, labor requirements, and total costs of putting up hay by various new methods, and the advantages and disadvantages of each.

HEATING

HARRINGTON, W. C. Suggestions for saving fuel. Mass. State Col. Engin. Ext. Ser. 87, 1 p., processed. Amherst, 1942. 275.29 M381En

SAVE OIL and keep warm. This report tells you, in specific terms, how with minimum expenditure - to get 15 to 35 % more heat out of every gallon of fuel oil if you have a pressure atomizing burner, and what changes to make in your house to keep it warmer. Consumer Rpts. 8(2, Tech. Sect.): 32-34. Feb. 1943. 321.8 C762

HYDRAULICS

DAVIS, CALVIN V. Handbook of applied hydraulics. 1084 pp. New York, McGraw-Hill book co., inc., 1942. 290 D292

JOHNSON, JOE W., KENNISON, KARL R. The hydraulic jump in sloping channels. Discussion. Amer. Soc. Civ. Engin. Proc. 69(2): 311-315. Feb. 1943. 290.9 Am3P

Discussion of a paper by Carl E. Kindsvater in the Nov. 1942 issue of the Proceedings.

STEVENS, J. C. Ninth annual report of the committee on hydraulic research. Civ. Engin. 13(2): 113-114. Feb. 1943. 290.8 C49

U. S. TENNESSEE VALLEY AUTHORITY. WATER CONTROL PLANNING DEPT. HYDRAULIC DATA DIV. Precipitation in Tennessee river basin. December 1942.

U. S. Tenn. Val. Authority Rpt. O-243-93, 10 pp., processed. [Knoxville, Tenn., 1943?] 173.2 T25Pre

HYDROLOGY

DAVENPORT, R. W., BEDNARSKI, EDWARD J., and POWELL, RALPH W. Statistical analysis in hydrology. Discussion. Amer. Soc. Civ. Engin. Proc. 69(2): 299-305. Feb. 1943. 290.9 Am3P

Discussion of paper by L. R. Beard in the Sept. 1942 issue of the Proceedings.

GUESMER, GEORGE O., and CORY, H. T. Early contributions to Mississippi river hydrology. Discussion. Amer. Soc. Civ. Engin. Proc. 69(2): 295-296. Feb. 1943. 290.9 Am3P

Discussion of paper by C. S. Jarvis in the March 1942 issue of the Proceedings.

INSULATION

BHARGAVA, M. P., and NAYER, A. N. The manufacture of insulation and pressed boards, wrapping-papers and straw-boards from bagasse. Imp. Council of Agr. Res. Misc. Bul. 44, 21 pp., 6 pls. Delhi, 1941. 22 Im7M

Purpose of the investigation was (1) to ascertain which of the several well-known processes for the manufacture and special treatment of boards would be suitable and economical for Indian conditions and requirements, (2) to find out what modifications were necessary for the adaptation of the known processes to Indian raw materials, and (3) to collect such data and information about the costs of production, markets, etc., as would be helpful in starting a new industry.

IRRIGATION

ARKANSAS. AGRICULTURAL EXPERIMENT STATION. Irrigation of vegetables. Ark. Agr. Expt. Sta. Ann. Rpt. (1942) 54: 50. Fayetteville, 1942. 100 Ar42

BENTON, R. J. Citrus trees and their irrigation needs. (To be cont.) Agr. Gaz. N. S. Wales 53(12): 566-569. Dec. 1, 1942. 23 N472

BROWN, FLOYD E. Heavy irrigation is a waste of water. U and I Cult. 3(2): 14-15. June 1942. 66.8 Un12

BURLEY, RAY H. Plastic siphon for irrigation. Nebr. Farmer 85(4): 5. Feb. 20, 1943. 6N27

The use of siphon tubes instead of lath boxes was found practicable on several York and Hamilton County farms in Nebraska in 1942. Metal conduit was used, but the use of plastic tubes is being investigated.

DARLEY, SIR BERNARD. Irrigation and its possibilities. In Mukerjee, Radhakamal. Economic problems of India v. 1, pp. 148-167. London, Macmillan and co., ltd., 1939. 280.182 M89

History and development of irrigation in India.

NEW POWER under the sun. Rural Electrification. News 8(6): 8-9. Feb. 1943. 173.2 R88Ru

"This article is based on information obtained from Jose Cadilla and Rolando Franceschini, Puerto Rican engineers spending a year in the REA Interning Engineers Program in St. Louis."

Puerto Rico's irrigation program.

OVERHOLSER, E. L., CLORE, W. J., and KENWORTHY, A. L. Orchard irrigation. Wash. Agr. Expt. Sta. Bul. 425, pp. 47-48. Pullman, Dec. 1942. 100 W27E

Report of experiments conducted during the year 1941/42.

POST-WAR planning - irrigation. Reclamation investigations. West. Construct. News 18(1): 13-19. Jan. 1943. 290.8 W522

More than 200 projects in 17 states are under investigation and 60 of these will be completed in 1943.

PUBLIC power and irrigation are number one problems for legislators. Nebr. Farmer 85(4): 22-23, 26. Feb. 20, 1943. 6 N27

Several power and irrigation projects are before the current Nebraska Legislature.

SAVAGE, C. G. Systems of orchard irrigation. Agr. Gas. N. S. Wales 53(11): 519-521. Nov. 1, 1942. 23 N472

"Four systems of irrigation are in use in orchards in New South

Wales. For three of them, viz., the furrow, the control flood or border, and the contour check systems, it is necessary to grade the land evenly in order to maintain a regular flow of water; irregular soil grades may cause local water-logging by restricting the flow. Where the spray system is used in the orchard, grading of the land is not so important, as the pipe lines through which the water runs are carried on overhead supports or laid out on the surface of the soil."

MANURE -- STORAGE

MANURE pit saves valuable nitrogen. Ohio Farmer, Consolidated with Ohio Stockman and Farmer 191 (4): 12. Feb. 20, 1943. 6 Oh3

MILK HOUSES

BODWELL, J. H. How to plan an electrically equipped milk room. Elect. on the Farm 16(2): 10-11. Feb. 1943. 335.8 E127

"When business calls for a new or larger milk room, plan it for labor saving, to meet health requirements and to be convenient. Planning will save money."

MOTORS, ELECTRIC

BUGBEE, RALPH. Quarter-horse motor hoists manure. Elect. on the Farm. 16(2): 24. Feb. 1943. 335.8 E127

"Vermont farmer rigs up small motor and old automobile transmission to do heavy lifting job. In use four years."

HARRINGTON, W. C. Electric motors for farm use. Mass. State Col. Engin. Ext. Ser. 89, 5 pp., processed. Amherst, 1942. 275.29 M381En

MOWING MACHINES

[SIMPSON, HOWARD W.] Arc welding mowers. Impl. and Tractor 58 (4): 40, 42, 58-59. Feb. 13, 1943. 58.8 W41

"Data and illustrations from a study submitted to the James F. Lincoln arc welding foundation by Harold W. Simpson, chief engineer in charge of designs and tests, Detroit Harvester Co., Detroit, Mich."

PAINTS AND PAINTING

GOWDER, M. T., and FALKNER, MAX H. Painting farm machines and equipment. Tenn. Agr. Col. Ext. Serv. Leaflet 52, 4 pp. Knoxville, 1943. 275.29 T25L

HARVEY, R. W. Farm repairs will help win the war. East. States Co-op. 19(2): 11. Feb. 1943. 280.28 Ea7

Suggestions for the use of paint to prolong life of equipment.

McMULLEN, E. W., and RITCHIE, E. J. Organization of a systematic test fence program. Indus. and Engin. Chem., Indus. Ed. 35(3): 161-171. Feb. 1943. 381 J825

Discusses details to be considered in planning test fence exposure program of house paints. Develops graphical method to study pigment composition containing as many as five components.

POULTRY HOUSES AND EQUIPMENT

- CHARLES, T. B. Remodeled barns - hen palaces. New England Homestead 116(3): 28-29. Feb. 6, 1943. 6 N442
- HOW TO build a "backyard" chicken coop. Amer. Builder and Bldg. Age 65(2): 51, illus. Feb. 1943. 296.8 Am3
- SANCTUARY, WM. C. Better poultry house ventilation will increase hen capacity. New England Homestead 116(3): 10-11. Feb. 6, 1943. 6 N442
- SEE ALSO BROODERS.

RAINFALL AND RUNOFF

- HORNER, GLENN M., and NAFFZIGER, LOY M. Runoff from agricultural watersheds. Wash. Agr. Expt. Sta. Bul. 425, p. 104. Dec. 1942. 100 W27E
- Measurement of amount and rate of runoff on five watersheds, three of which have been under study for ten years.
- LEOPOLD, LUNA B. Characteristics of heavy rainfall in New Mexico and Arizona. Amer. Soc. Civ. Engin. Proc. 69(2): 205-234. Feb. 1943. 290.9 Am3P
- "The relation of rainfall frequency to geographic position and topographic relief are discussed, and recommendations are made for the use of these data for design purposes."
- WHITE, GEORGE V. Rainfall in New England. Part I. Rainfall in Massachusetts. New England Waterworks Assoc. Jour. 56(4): 405-502. Dec. 1942. 292.2 N44

RAKES

- KITCHING, H. W. Buck rakes. Ontario Dept. Agr. Statis. and Pubs. Branch Bul. 427, [6] pp., illus. Feb. 1943. 101 On8B
- Instructions for automobile or tractor mounting.
- RICHEY, C. B., and BARDEN, R. D. How to build a buck rake. Impl. and Tractor 58(3): 14-15, 24, illus. Jan. 30, 1943. 58.8 W41
- SHIPMAN, R. C. Sweep rakes on Indiana farms. Hoard's Dairyman 88(4): 112. Feb. 25, 1943. 44.8 E65

RECLAMATION

- RECLAMATION bureau studies projects' economic aspects: Studies of Central valley project, now under way, seek to ascertain economic effects of huge power-irrigation jobs on economy of lands included in territory. Engin. News-Rec. 130(7): 255-256. Feb. 18, 1943. 290.8 En34

REFRIGERATION

- THOMSEN, L. C. Conservation of power in refrigeration. Ice Cream Trade Jour. 39 (1): 20-21, 37-42, charts. Jan. 1943. 389.8 Ic2
- Excerpts, with title, Conservation of Power through Efficient Operation of Refrigerating Equipment, in Ice Cream Field 41 (1): 22-23, 25. Jan. 1943. 389.8 Ic23
- Condensed in Jour. Milk Technol. 6 (1): 35-38, charts. Jan.-Feb. 1943. 44.8 J824
- Address, Michigan Dairy Manufacturers' Conference, East Lansing, Nov. 4-6, 1942.
- Possible conditions which may serve as a basis for economizing on refrigeration are discussed.

REFRIGERATORS

- A CHARCOAL cool safe for country homes. Agr. Gaz. N. S. Wales 53(12): 547-548, illus. Dec. 1, 1943. 23 N472
 Describes a cooler of simple construction, for use where ice is not available.
- ELECTRIC refrigerators. Consumer Rpts. 8(2, Tech. Sect.): 45-46. Feb. 1943. 321.8 C762
 "Care and repair."

ROOFS

- GOODMAN, A. M. Twelve years of roof protection. Amer. Agr. 140(4): 1, 17. Feb. 13, 1943. 6 Am3
 Describes a ventilating system for a dairy barn.

SEWAGE DISPOSAL

- HARRINGTON, W. C. The construction of cesspools. Mass. State Col. Engin. Ext. Ser. 82, 2 pp., processed. Amherst, 1941. 275.29 M381En
 SEPTIC tank is farm necessity. Wash. Farmer 68(2): 6, illus. Jan. 28, 1943. 6 R151

SILOS

- GARNER, FRANK H. Recent developments in silage making. Roy. Agr. Soc. England. Jour. 103: 161-166. 1942. 10 R81
 Discusses various types of silos.
- HARRINGTON, W. C. Silo hoopage standards. Mass. State Col. Engin. Ext. Ser. 81, 1 pp., processed. Amherst, 1941. 275.29 M381En
 LOS SILOS. Bol. de Agr. y Ganad. 1(9): 45-49. Nov. 2, 1942. 9 B637
 General discussion.
- SILOS y ensilaje. Bol. Agr. [Medellin] nos. 277-278, pp. 1972-1975. Aug.-Sept. 1942. 9.4 Sol

SILT

- DOBBINS, WILLIAM E. Effect of turbulence on sedimentation. Amer. Soc. Civ. Engin. Proc. 69(2): 235-262. Feb. 1943. Bibliography. 290.9 Am3P
 "This paper presents the results of studies made in an effort to extend the theory [of turbulent flow] to explain the concentration changes in a stream or settling basin under nonequilibrium conditions. The general differential equation expressing the concentration changes during turbulent sedimentation in an infinitely wide stream is derived, and the complete solution for a certain simplified case is presented."
- ZWERNER, G. A., JOHNSON, J. W., and FLAXMAN, E. M. Advance report on the sedimentation survey and suspended-matter observations in Lake Issaqueena, Clemson, South Carolina, 1940-1941. U. S. Soil Conserv. Serv. Sedimentation Sect. Off. Res. SCS-SS-37, 36 pp., processed. Washington, D. C., 1942. 1.96 R31R

SNOW SURVEYING

CALIFORNIA. DEPT. OF PUBLIC WORKS. DIV. OF WATER RESOURCES. California cooperative snow surveys; monthly bulletin of snow survey and precipitation data. 14 pp., processed. Sacramento, Feb. 10, 1943. 340.9 C12

U. S. SOIL CONSERVATION SERVICE DIV. OF IRRIGATION. Snow surveys and irrigation water forecasts for Columbia basin and adjacent coastal areas as of January 1, 1943. 12 pp., processed. Washington, D. C., 1943. 1.96 R31Fs

SOIL STERILIZATION

TAVERNETTI, J. R. Soil now pasteurized by continuous electric process. Elect. on the Farm 16(2): 13-14. Feb. 1943. 335.8 E127
 "Plant diseases, fungi and weed seeds destroyed by passing soil through electrically heated four-inch pipe. Uses 5 kw to treat 5 cu ft of soil per hour. Temperatures controlled between 140° and 212°."

STORAGE OF FARM PRODUCE

BARRE, H. J., and KELLY, C. F. Grain storage problems and investigations. U. S. Bur. Agr. Chem. and Engin. ACE-127, 9 pp., processed. [Washington, D. C., 1941] 1.932 A2Ag8

Paper presented before the fall meeting of the Farm Structures Division, A.S.A.E., Chicago, Illinois, December 1941.

HARRINGTON, W. C. Storing hay. Mass. State Col. Engin. Ext. Ser. 83, 2 pp., processed. Amherst [n.d.] 275.29 M381En

HUKILL, W. V., and SMITH, EDWIN. Apple storage in the Wenatchee-Okanogan Valley. U. S. Bur. Agr. Chem. and Engin. ACE-132, 32 pp., processed. Washington, D. C., Aug. 1942. References. 1.932 A2Ag8

In cooperation with the Bureau of Plant Industry, Agricultural Research Administration.

MASSACHUSETTS. STATE COLLEGE. EXTENSION SERVICE. Suggestions for the installation of protecto-wire to detect high temperatures in hay mows. Mass. State Col. Engin. Ext. Ser. 86, 1 p., processed. Amherst, 1942. 275.29 M381En

SMALL HOME-MADE GRAIN ELEVATORS. Elect. on the Farm 16(2): 4. Feb. 1943. 335.8 E127

SYMONS, T. B. Victory gardens. Md. Univ. [Agr.] Ext. Bul. 94, 30 pp. College Park, Mar. 1942. 275.29 M36B

Discusses winter storage and gives simple storage arrangements.

SWINE HOUSES AND EQUIPMENT

HUNT, WALTER J. You'll see double - double purposes, double profit in this farm-tested farrowing house. Successful Farming 41(3): 48-49, 63. Mar. 1943. 6 Sul2

Plans and description of a portable colony house.

MULDROW, M. W., and JOHNSON, S. R. Swine production in Arkansas. Ark. Agr. Col. Ext. Cir. 385, rev. 13 pp. Little Rock, Jan. 1943. 275.29 Ar4

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WARD, HARLEY M. New, round farrowing house. Successful Farming 41(2): 56-57, illus. Feb. 1943. 6 Sul2

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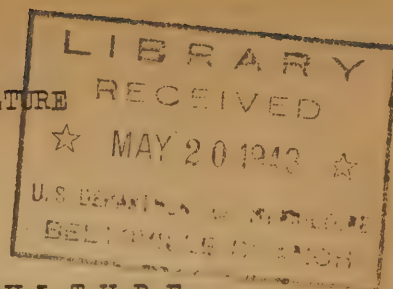
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ZINK, CARLTON. Old tools for tractor use. Nebr. Farmer 85(5): 4. Mar. 6, 1943. 6 N27

Discusses the salvaging of outmoded tools and the adapting of them for use with, or on, modern farm tractors.

SEE ALSC Beet Machinery; Cotton Machinery; Plows; Etc.

FARM MACHINERY AND EQUIPMENT - RATIONING

U. S. FOOD PRODUCTION ADMINISTRATION. Farm machinery and equipment. Fed. Register 8(53): 3243-3244. Mar. 17, 1943. 169 F31

Amendment 1 to Sup. Order 1, FPO 3; Amendment 2 to Sup. Order 3, FPO 3; FPO 3, Announcement 4; Amendment 3 to Sup. Order 3, FPO 3 --
New Machinery and Equipment.

FARM MACHINERY AND EQUIPMENT - RENTAL

JONES, MACK M., and HIGHTOWER, LLOYD E. Rental rates for farm machines. Mo.Agr.Expt.Sta.Cir.252, 5pp. Columbia, Jan.1943. 100 M683

Rental rates suitable for Missouri conditions are suggested; and custom work and charges are also discussed.

MACHINE custom work charges. Country Guide 62(3): 16-17. Mar.1943. 7 G76

Basic rates recommended by the Agricultural Engineering Committee of Canada, and prices actually charged in Saskatchewan.

McKAY, GRIF. Rates for custom work. Farm Jour. 67(4): 21, 72. Apr. 1943. 6 F2212

Discussion of use and rates to be charged for farm machinery. TUCKER, E.A., and NELSON, PETER. A method of determining rates for farm machine rent and custom work. Okla. Agr. Expt. Sta. Cur. Farm Econ. 16(1): 11-19. Feb. 1943. 100 Ok4

"A fair rate for machinery rental on farms is dependent upon two things: first, the total cost of the service rendered by the machine; and second, the amount of use which can be expected from a particular piece of equipment during its lifetime. To derive a 'custom rate', wages for labor and materials furnished must be added to the machinery rental figure."

FARM MACHINERY AND EQUIPMENT - REPAIR

BLASINGAME, R.U. Machinery repair. Pa.Farmer 128(5): 11. Mar.13, 1943. 6 P383

COOPER, GENE. "Blue tag" farm machines. Country Gent. 113(3): 30. Mar. 1943. 6 C833

Suggestions for putting into working condition all farm machines, as part of Iowa's farm machine repair program.

DAVIDSON, J. BROWNEE. Important - check the spreader. Successful Farming 41(4): 58-59. Apr. 1943. 6 Sul2

Lists important parts to be checked.

KLEIN, PATSY. Take care of your farm equipment. Calif. Cult. 90(6): 147. Mar. 20, 1943. 6 Cl2

PACKER, C.E. Recharging magnets for better spark. Impl. and Tractor 58(6): 38-40. Mar. 13, 1943. 58.8 W41

Describes method of increasing efficiency.

PUTTING the harness in shape; one place where a stitch in time saves nine. Country Guide 62(3): 28. Mar. 1943. 7 G76

Illustrated directions for making simple repairs.

TURNER, C.N. A farm machinery repair program. Agr. Engin. 24(3): 81-83. Mar. 1943. 58.8 Ag83

Paper presented at meeting of American Society of Agricultural Engineers, Chicago, Ill., Dec. 8, 1942.

U.S. EXTENSION SERVICE. Care - repair - share; a manual for the 1943 farm machinery campaign; keep 'em rolling on the farm front. 14 pp., processed. [Washington, D.C., 1943] 1.913 E5018

FARM STRUCTURES

BUILD and sell these farm aids. Amer. Builder and Bldg. Age 65(3): 66. Mar. 1943. 296.8 Am3

Brief instructions for making baby pig warmer, chicken roosts, and milk can rack.

CARTER, DEANE G. Build now for production. Successful Farming 41(4): 20-21, 58. Apr. 1943. 6 S12

Tells how building may be done in view of priorities.

COUNT on prefabricated farm, utility, store, industrial and public buildings. Amer. Builder and Bldg. Age 65(3): 46-47. Mar. 1943. 296.8 Am3

Includes construction details of arch roof hog cot, planned by Michigan State College, showing typical prefabrication procedure.

ESPLIN, A. LAMAR. Sorting chutes, panels, hay self-feeders will make lamb feedlot operations easier. Colo. Farm Bul. 5(1): 6-7. Jan./Mar. 1943. 100 C71S

GIESE, HENRY. Can farm structures be standardized? Agr. Engin. 34(3): 69-72. Mar. 1943. References. 58.8 Ag83

Paper presented at meeting of American Society of Agricultural Engineers, Chicago, Ill., Dec. 7, 1942.

SEE ALSO Barns; Poultry Houses and Equipment; Etc.

FENCE POSTS

MAKE important posts stay put. Idaho Farmer 61(4): 2, illus.

Feb. 25, 1943. 6 G282

Also in Oreg. Farmer 66(4): 2. Feb. 25, 1943. 6 Cr32; and in Wash. Farmer 68(4): 6. Feb. 25, 1943. 6 R151

Method of anchoring corner post with buried stones.

FERTILIZER PLACEMENT

[AMERICAN AGRICULTURAL CHEMICAL COMPANY] War-time fertilizers; how to make the most of them. N.J. Farm and Garden 14(3): 22-25. Mar. 1943. 6 G162

Digest of a booklet issued by the company.

FIRE PROTECTION

[BECK, ROY S.] Make your farm safe! Vt. Agr. Col. Ext. Brieflet 656, [6] pp. [Burlington, Jan. 1943] 275.29 V59E

Includes score sheet for farm fire prevention.

BRIGHAM, REUBEN. Rural fire prevention in the war emergency. 7 pp., processed. Washington, D. C., [U.S. Extension service] 1942. 1.913 A2B76

Address delivered at a joint meeting of the agricultural committees of the National Fire Waste Council and National Fire Protection Association, Palmer House, Chicago, Ill., Nov. 30, 1942.

FLOODS AND FLOOD CONTROL

GILMAN, EDGAR D. Primary rôle of meteorology in flood flow estimating; discussion. Amer. Soc. Civ. Engin. Proc. 69(3): 443-445. Mar. 1943. 290.9 Am3P

Discussion of paper by Merrill Bernard, published in January 1943, Proceedings.

POST-WAR planning - flood control. Army investigating new work. West. Construct. News 18(1): 9-10. Jan. 1943. 290.8 W522
Construction can be started with less than a month's notice on a \$500,000,000 flood control and waterway improvement program in the Western States from plans completed by the Corps of Engineers.

FLOW OF WATER

GAVETT, WESTON. Computation of flows in distribution systems. Amer. Waterworks Assoc. Jour. 35(3): 267-287. Mar. 1943. 292.9 Am32J

Paper discusses basis data governing design of distribution systems and also gives a description of the application of the Hardy Cross method and its derivation. Other methods described include the "method of sections" and the "method of equivalent pipes." A preliminary test of a hydraulic network analyzer using orifices is also reported.

HIRSCH, A.A. Identical value method for solving simple pipe-flow problems. Amer. Waterworks Assoc. Jour. 35(3): 288-294. Mar. 1943. 292.2 Am32J

Discusses the simplification of pipe-flow technique.

KIAPP, ROBERT T., AND KINDESVATER, CARL E. Entrainment of air in flowing water, a symposium; discussion. Amer. Soc. Civ. Engin. Proc. 69(3): 435-442. Mar. 1943. 290.9 Am3P

Discussion of Symposium published in September 1942, Proceedings.

MOCKMORE, C.A. Flow around bends in stable channels. Amer. Soc. Civ. Engin. Proc. 69(3): 335-360. Mar. 1943. 290.9 Am3P

"Two sets of assumptions were made as to the nature of the filamental velocities of flow around a bend, and a mathematical analysis was made of the streamlines, accelerations, and velocity components by use of the laws of hydrodynamics." - Synopsis.

HARVESTING MACHINERY

DUFFEE, FLOYD. "Corn attachment" for forage harvester looks promising. Wis. Agr. Expt. Sta. Ann. Rpt. 1942, pt. 1, pp. 1-3. Madison, 1943. 100 W75

Reports tests.

DUFFEE, FLOYD, BRUHN, H.D., and KRUEGER, C.H. Custom grass silage-making is feasible. Wis. Agr. Expt. Sta. Ann. Rpt., 1942, pt. 1, pp. 3-4. Madison, 1943. 100 W75

Results of tests on field forage harvesters.

DUFFEE, F.W. Forage harvester saves labor and costs. Wis. Agr. Expt. Sta. Ann. Rpt., 1942, pt. 1, pp. 4-6. Madison, 1943. 100 W75

HIGGINS, F.HAL. Combining radishes and squash. Impl. Rec. 40(3): 13. Mar. 1943. 58.8 Im73.

Use of combine for harvesting radish and squash seed.

INGENIOUS hop harvester. Impl. Rec. 40(3): 28. Mar. 1943. 58.8 Im73

JOHN DEERE beet harvester. Sugar Jour. 5(10): 5-6. Mar. 1943. 65.8 Su391

Tests have shown that one John Deere beet harvester will replace from six to eight men at harvest time. Users last fall reported savings of from \$30 to as much as \$60 per day in harvesting costs over old method of hand labor.

HOTBEDS AND COLD FRAMES

ELECTRIC hotbed care and operation. Elect. on the Farm 16(3): 13.
Mar. 1943. 335.8 E127

HOTBEDS steal march on weather. Idaho Farmer 61(4): 9, illus.
Feb. 25, 1943. 6 G282

Also in Oreg. Farmer 66(4): 9. Feb. 25, 1943. 6 Or32; and
in Wash. Farmer 68(4): 9. Feb. 25, 1943. 6 R151

Directions for making manure and electric hotbeds.

MURRAY, H.R. Hotbeds and coldframes. Macdonald Col. Jour.
3(7): 6, 24. Mar. 1943. 101 M144

POLLARD, L.H. Preparation and management of coldframes and hotbeds.
Utah Farmer 62(14): 8, 17. Mar. 10, 1943. 6 D45

HYDRAULICS

TIFFANY, JOSEPH B., JR. Recent hydraulic laboratory developments.
Mil. Engin. 35(209): 134-138. Mar. 1943. 290.9 Un3

Article is a discussion of some of the instruments and methods
of analysis recently developed at the U.S. Waterways Experiment
Station.

IRRIGATION

DILLE, J.M. Irrigation problems in northern Colorado. Natl.
Reclam. Assoc. Proc. 1942: 97-110. Washington, D.C., 1943.
55.9 N212

General picture of the Northern Colorado Water Conservancy
District and the Colorado-Big Thompson Reclamation Project.

GEARHEART, HATLER. Irrigation for germination and crust problems.
U & I Cult. 8(1): 11. Feb. 1943. 66.8 U12

HAW, J.W. Irrigation in our war and post-war period. Natl.
Reclam. Assoc. Proc. 1942: 53-64. Washington, D. C., 1943.
55.9 N212

Presents program for adequate land utilization and food
production.

SCHOENLEBER, L.H. A study of garden irrigation. Agr. Engin. 24(3):
75-78, 80. Mar. 1943. 58.8 Ag83

Paper presented at meeting of American Society of Agricultural
Engineers, Chicago, Ill., Dec. 8, 1942.

U.S. BUR. OF PLANT INDUSTRY, DIV. OF IRRIGATION AGRICULTURE. List
of publications relating to the activities of the Division of
irrigation agriculture. August 1942. 21pp., processed.
Washington, D.C., 1942. 1.965 I2L69

VICTORIA. STATE RIVERS AND WATER SUPPLY COMMISSION. Thirty-
seventh annual report, 1941-42. 83pp. Melbourne, 1942.
292.9 V66

Irrigation development, pp. 9-10; Drainage and flood protection,
pp. 28-30.

WELDON, M.D. Maintaining soil fertility for potato production under
irrigation in western Nebraska. Nebr. Potato Impr. Assoc. Ann. Rpt.
(1941) 22: 13-14. 75.9 P842

WYLIE, C.E., NEEL, L.R., and SCHALLER, J.A. Irrigated pasture for
dairy cows. Tenn. Agr. Expt. Sta. Ann. Rpt. (1941) 54: 34.
Knoxville, 1942. 100 T25S

Feed and production records were kept for groups of cows kept on
irrigated and unirrigated fields. In general, it cost approximately
twice as much to produce pasture by irrigation as by normal rainfall.

IRRIGATION WATER

- BENTON, R. J. Citrus trees and their irrigation needs. (Concl.) Agr. Gaz. N.S. Wales 54(1): 33-35. Jan. 1, 1943. 23 M472
- "In this issue the author describes the application of irrigation water to the various types of soils used for citrus so as to ensure as nearly as possible the needs of the trees for moisture."
- GARDNER, J. L., and HUBBELL, D. S. A study of the effects of silty irrigation water from an intermittent stream on crops and soils in controlled plots. Amer. Soc. Agron. Jour. 34(12): 1090-1101, illus. Dec. 1942. References. 4 Am34P.
- U. S. BUREAU OF PLANT INDUSTRY. DIVISION OF IRRIGATION AGRICULTURE. Methods of analysis used in the Rubidoux laboratory, Riverside, California. Ed. 4, rev., 66 pp., illus., processed. July 1942. 1.965 I2M56.

LIGHTNING

- ROPER, WILLIAM L. Lightning strikes the farm. Your Farm 1(4): 41-44 Dec. 1942. 6 Y8
- Fifteen percent, or nearly \$50,000,000 of our national annual fire loss is caused by lightning. Properly installed lightning rods will serve to prevent this loss of farm property.

LUBRICATION

- FARM machinery lubrication - part 1. Lubrication 29(1): 1-12. Jan. 1943. 307.8 L96
- KLEIN, JACK. Lubrication is the watchword. Calif. Cult. 90(6): 147, 167. Mar. 20, 1943. 6 C12
- WRIGHT, FORREST B. How to oil electric motors. Elect. on the Farm 16(3): 8-9, 22. Mar. 1943. 335.8 E127
- "Too much oil bad as too little. Learn to oil right; It's easy. Different types of bearings. Kind of oil to use."

MANURE SPREADERS

- ANGELL, GEORGE N. Here is a homemade contraption that saves hours. Idaho Farmer 61(5): 3. Mar. 11, 1943. 6 G282
- Describes home-made spreader.

MODELS

- COX, GLEN N. Conformity between model and prototype, a symposium; discussion. Amer. Soc. Civ. Engin. Proc. 69(3): 417-421. Mar. 1943. 290.9 Am3P
- Discussion of Symposium published in October 1942, Proceedings.

MOTOR FUELS

- OWEN, WILLIAM L. Motor fuel from molasses, V, The motor fuel program as integrated with the milling of the entire cane stalk. Sugar 38(3): 22-27. Mar. 1943. References. 65.8 F11
- PAVIA, R. E. Woodgas producers for motor vehicles. (A survey of European experience.) Inst. Engin. Austral. Jour. 14(12): 279-292. Dec. 1942. References. 290.9 In75
- "This paper is a summary, from the available literature, of the state of knowledge of woodgas and woodgas producers in Europe, up to 1939. The properties of the gas, and the construction and performance of the main Continental types of producer are described, and the question of the possible use of such producers in Australia is discussed. Australian conditions may be particularly suitable for woodgas producers." - Summary.

MOTORS, ELECTRIC

- KABLE, GEO. W. Protect your wiring and motors - they're scarce.
Elect. on the Farm 16(3): 5-7. Mar. 1943. 335.8 E127
"Automatic protection, how it is accomplished. What the protection devices look like and what they do and cost. Fuses, non-temperable fuses, fustats, fusetrans and circuit breakers."

PAINTS AND PAINTING

- MORRIS, FLOYD. Paint is a shield. South. Agr. 72(3): 10-11.
Mar. 1943. 6 So83.
Discusses keeping farm houses, other farm buildings and farm machinery well painted to make them last longer.
PAINTS for sheet-metal roofs. Tenn. Agr. Expt. Sta. Ann. Rpt.(1941) 54:21. Knoxville, 1942. 100 T25S
Experiments in cooperation with the American Zinc Institute were started to determine the efficiency of various paints as protective covering for galvanized iron roofs after they show indications of rust. Conclusive results will not be reached for several years.

PEST CONTROL

- SPAWN, GERALD B. Tillage methods in grasshopper control. S. Dak. Agr. Expt. Sta. Ent. Pam. 4, 7pp., processed. Brookings, 1943.
100 So82
A progress report.

PLOWS

- BROWN, STEVE C. Por qué se ara? Hacienda 38(3): 103-106.
Mar. 1943. 6 H11
Discussion of plowing and various types of plows.
LEWTON, F. L. Notes on the old plows in the United States national museum. Agr. Hist. 17(1): 62-64. Jan. 1943. 30.98 Ag8

POULTRY HOUSES AND EQUIPMENT

- A BACKYARD flock will solve your meat problem. Pop. Mechanics Mag. 79(4): 40-43, 160. Apr. 1943. 291.8 P81
Discusses equipment.
CARTER, C. W. An ideal laying house designed. Farm and Ranch 61(11): 26. Nov. 1942. 6 T31
Describes house developed at Texas Agricultural Experiment Station.
DE FOREST, JACK. Ventilating with straw. Iowa Agriculturist 44(3): 5. Mar. 1943. 6 Io9
Straw-loft poultry houses are efficient and inexpensive, but their use requires care for successful operation.
KLEIN, G. T. Uses of summer laying shelters. Amer. Poultry Jour. 74(4): 4, 11-12. Apr. 1943. 47.8 Am32
POULTRY house remodeling. Amer. Poultry Jour. 74(4): 40-41, 55. Apr. 1943. 47.8 Am32
[SEATON, M. A., and HALBROOK, E. R.] Poultry handbook. Kans. State Col. Agr. Ext. Cir. 157, 46 pp. Manhattan, Oct. 1942. 275.29 K12Ex
Recommendations regarding housing and equipment are made on pages 3-6.
SNYDER, EARLE S. Poultry equipment for the busy farmer. Ontario Dept. Agr. Bul. 428, 19 pp. Guelph, 1943. 101 On8B

TRIBUNE-WAY suburban chicken cottage, designed at Poultry tribune exp. farm. Comment by G. T. Klein. Poultry Tribune 49(3): 6,8,22, 24. Mar. 1943. 47.8 P8642

Plans and bill of materials are given for a small poultry house for 12 hens.

WHITFIELD, W. R. If you can't buy it - make it. Turkey World 18(3): 16-17, 54-55. Mar. 1943. 47.38 T84

Discusses the construction of turkey raising equipment.

RAINFALL AND RUNOFF

FARROW, R. C. Forecasting run-off from snow surveys. Geog. Jour. 100(5/6): 206-222. Nov./Dec. 1942. 472 G27

Topics discussed: The conservation and loss of snow; Fundamental relationships; Distorting factors; The technique of snow surveys; Developing a snow-survey system; Accuracy; Measurement of streamflow.

HORNER, G. M., and NAFFZIGER, L. M. Hydrologic studies. Compilation of rainfall and run-off from the watersheds of the Pacific north-west conservation experiment station, 1932-40. U.S. Soil Conserv. Serv., Hydrologic Div., Res. SCS-TP-43, charts. Washington, D. C., 1942. 1.96 Ad6Tp

RECLAMATION

FORTAS, ABE. Reclamation and western development. Natl. Reclam. Assoc. Proc. 1942: 32-37. Washington, D. C., 1943. 55.9 N212

Review of the situation and an analysis of the difficulties.

HERRING, FRANK W. Coordination in the development of natural resources. Natl. Reclam. Assoc. Proc. 1942: 92-96. Washington, D. C., 1943. 55.9 N212

LINEWEAVER, G. W. Investment status of private and federal projects. Natl. Reclam. Assoc. Proc. 1942: 76-82. Washington, D. C., 1943. 55.9 N212

Discussion of the problems involved due to the proposed legislation to transfer to the Reclamation fund all reclamation and irrigation district bonds held by any federal corporation or lending agency.

McBRIDE, DON. Preparation for post-war reclamation development. Natl. Reclam. Assoc. Proc. 1942: 127-133. Washington, D. C., 1943. 55.9 N212

NATIONAL RECLAMATION ASSOCIATION. Proceedings 11th annual meeting, Denver, Colorado, October 14, 15, 16, 1942. 217pp. Washington, D. C., 1943. 55.9 N212

PAGE, JOHN C. Reclamation in a world at war. Natl. Reclam. Assoc. Proc. 1942: 37-45. Washington, D. C., 1943. 55.9 N212

General discussion of the objectives of the Bureau of Reclamation Projects.

REYBOLD, EUGENE. Post-war development of our river basins. Natl. Reclam. Assoc. Proc. 1942: 147-152. Washington, D. C., 1943. 55.9 N212

RYAN, M. O. The future of the water conservation and utilization program. Natl. Reclam. Assoc. Proc. 1942: 134-138. Washington, D. C., 1943. 55.9 N212

Discussion of the Case-Wheeler reclamation program. Panel discussion by Wesley R. Nelson and Clifford Willson.

STEWART, GEORGE. Land reclamation. In Eldridge, Seba. Development of collective enterprise, dynamics of an emergent economy, pp. 96-119. Lawrence, Kans., University of Kansas press, 1943.

References. 280.12 EL2D

A historical study of irrigation and flood control as examples of successful collective enterprise.

STONE, CLIFFORD H. Analysis of Bone-Smith amendment to Bonneville act. Natl. Reclam. Assoc. Proc. 1942: 83-92.

Washington, D. C., 1943. 55.9 N212

Purpose of the legislation is to amend the Bonneville act, to authorize the acquisition of utility systems and to coordinate the operation of the Government's power facilities on the Columbia River. Article analyzes the bill and discusses the problems involved.

U. S. CONGRESS. HOUSE. COMMITTEE ON IRRIGATION AND RECLAMATION. The Columbia basin project act. Hearings...seventy-eighth Congress, first session, on H. R. 839...Jan. 27, 1943. [Pt.3], 33 pp. Washington, D. C., 1943. 148.9 Ir77C

U. S. NATIONAL RESOURCES PLANNING BOARD. The Pecos river - joint investigation: Reports of the participating agencies. 2v. Washington, D. C., U. S. Govt. print. off., 1942. 173.2 N214Pec

A summary of these reports constitutes the text of "Regional planning - part X - Pecos river basin."

Contents: Climatic characteristics and data; Reports of the United States Geological Survey: Surface water; geology and ground water; quality of water; Water utilization, watershed management, and salinity: History of irrigation development; survey of water-consuming areas; consumptive water use and requirements; drainage in the river valley of the lower basin; watershed management and conservation; salinity in irrigated soils of the middle and lower basins; Recreational and wildlife values; flood control.

REFRIGERATION

COSBIE, A. J. CURTIN. Economics of refrigeration. Bakers Digest 17(1): 33. Feb. 1943. 389.8 Sil

"Considerable economics can be effected in the operation of refrigerating equipment by paying close attention to the power requirements of the compressor. Since these power requirements correspond rather closely with the over-all efficiency of the machine, they afford a rather reliable indication of the actual performance obtained from the equipment."

MEYER, E. C. Essentials of a farm type frozen food cabinet. Agr. Engin. 24(3): 84-85. Mar. 1943. 58.8 Ag83

Paper presented at meeting of American Society of Agricultural Engineers, Milwaukee, Wis., June 29, 1942.

REFRIGERATORS

MOONEY, MARK. Portable refrigerators for the armed forces.

Refrig. Engin. 45(3): 169-170. Mar. 1943. 295.9 Am32J

"Presented before the Boston Section of the American Society of Refrigerating Engineers, November 20, 1942."

Includes specifications for standard "packaged" refrigeration unit for portable refrigerators for the armed forces.

RESERVOIRS

SCHMIDT, LEWIS A. Concrete reservoirs of the vertical-beam type; discussion. Amer. Soc. Civ. Engin. Proc. 69(3): 456-457.

Mar. 1943. 290.9 Am3P

Discussion of paper by C. Maxwell Stanley, published in December 1942, Proceedings.

ROOFS

LOTZ, HERBERT F. Short cut estimating methods for fast and profitable selling. No. 2. How to figure barn roofing. Amer. Builder and Bldg. Age 65(3): 62,76. Mar. 1943. 296.8 Am3

ROPE

U. S. OFFICE OF PRICE ADMINISTRATION. Jute and istle yarn, rove and rope. Fed. Register 8(49): 2994-2996. Mar. 11, 1943. 169 F31
Maximum Price Regulation 340.

SEEDING MACHINE

[ARNOLD, H. A.] Seed hullers. Tenn. Agr. Expt. Sta. Ann. Rpt. (1941) 54:18. Knoxville, 1942. 100 T25S

To facilitate the removal of dodder, the possibility of using the abrasive-disk seed scarifier to hull annual Lespedeza seed, especially Korean, was investigated.

[ARNOLD, H. A.] Seed scarifier. Tenn. Agr. Expt. Sta. Ann. Rpt. (1941) 54:17. Knoxville, 1942. 100 T25S

Report of tests conducted during the year.

SILT

CLAXTON, PHILIP. Influence of silt on river behaviour. Inst. Civil Engin. Jour. 19(3): 183-190. Jan. 1943. References. 290.9 In74J

The author rejects the view that a stream will meander to adapt velocity to tenacity of bank. He maintains that, given a straight reach, the river tends to remain straight though velocity be increased. Where flow is not so direct, it tends to re-establish tortuosity, silt load from bank erosion being the pre-disposing cause.

SOIL MOISTURE

NUCKOLS, S. B. Controlled soil moisture variation studies in sugar beet growing. Natl. Reclam. Assoc. Proc. 1942: 111-126.

Washington, D. C., 1943. 55.9 N212

Discussion of experiments conducted in Nebraska to coordinate the proper use of the land with the proper use of the available supply of water.

RUSSEL, J. C. Observations on soil moisture storage in plots followed by the subsurface tillage, basin listing, and clean plowing methods at Box Butte experimental farm in 1940. Nebr. Potato Impr. Assoc. Ann. Rpt. (1941) 22: 15-16. 75.9 P842

SOILS

FELD, JACOB, and ZEEVAERT, LEONARD. Application of soil mechanics in designing building foundations; discussion. Amer. Soc. Civ. Engin. Proc. 69(3): 449-455. Mar. 1943. References. 290.9 Am3P
Discussion of paper by A. Casagrande and R. E. Fadum, published in November 1942, Proceedings.

FELD, JACOB. Relation of undisturbed sampling to laboratory testing. Amer. Soc. Civ. Engin. Proc. 69(3): 433-434. Mar. 1943. 290.9 Am3P
Discussion of paper by P. C. Rutledge, published in November 1942, Proceedings, dealing with the techniques and equipment for sampling of soil.

SPILLWAYS

JOHNSON, JOE W. Aeration of spillways; discussion. Amer. Soc. Civ. Engin. Proc. 69(3): 422-424. Mar. 1943. 290.9 Am3P
Discussion of paper by G. H. Hickox, published in December 1942, Proceedings.

STORAGE OF FARM PRODUCTS

EDGAR, ALFRED. Storage of late crop potatoes. Nebr. Potato Impr. Assoc. Ann. Rpt. (1941) 22: 16-22. 75.9 P842

Report of the work carried on in cooperation between the U. S. Department of Agriculture, State agricultural experiment stations and potato growers.

FARM storage cellar. Wis. Agr. and Farmer 70(5): 11. Mar. 6, 1943. 6 W751

SUGAR CANE MACHINERY

ESTE comerciante hizo algo más que vender máquinas para caña de azúcar. Hacienda 38(3): 118. Mar. 1943. -6 H11

Discussion of sugar-cane machinery.

MACHINES needed to maintain sugar production. Sugar Jour. 5(9): 3-4. Feb. 1943. 65.8 Su391

SWINE HOUSES AND EQUIPMENT

HELGESON, JOHN T. Put your own floor under pork profits. Successful Farming 41(4): 21, 71. Apr. 1943. 6 Su12

HOUSING for porkers: Mortgage lifters in 1943. Amer. Lumberman, no. 3253, pp. 14-17. Mar. 20, 1943. 99.81 Am3

MOVABLE hog house - 8 x 18 ft. Miss. Val. Lumberman 74(12): 10, illus. Mar. 19, 1943. 99.81 M69

Plan D-776, Extension Service, Iowa State College.

[SCHWAB, J. W.] Home-made hog equipment. Purdue Agr. Ext. Ext. Bul. 199, rev., [8]pp. Lafayette, Ind., Jan. 1943. 275.29 In2E

WILKES, ROY, and DICKEY, H. C. Self-feeder, movable automatic waterer suggested as labor savers in hog growing. Colo. Farm Bul. 5(1): 11. Jan./Mar. 1943. 100 C71S

TERRACING

CARNES, ARVY. Building terraces with slip scrapes. Better Crops with Plant Food 27(2): 25-26, 46. Feb. 1943. 6 B46

Terraces cannot be built as rapidly as with tractors and heavier equipment, but method is economical and labor can be used when other work is not so pressing.

U. S. SOIL CONSERVATION SERVICE. UPPER MISSISSIPPI REGION. Terrace with your own plow. 8 pp., processed. [Milwaukee, Wis., 1943] 1.9605 T27

Directions for the "island" method of terracing.

TRACTORS

IS YOUR tractor rarin' to go? Tune 'er up now - save time, expense later. Prairie Farmer 115(6): 15. Mar. 20, 1943. 6 P883B

SAVE time, fuel and money by making your tractor work at its full capacity. Dakota Farmer 63(5): 101-102. Mar. 6, 1943. 6 D14

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WATER RIGHTS

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Vol. 2

May 1943

No. 5

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